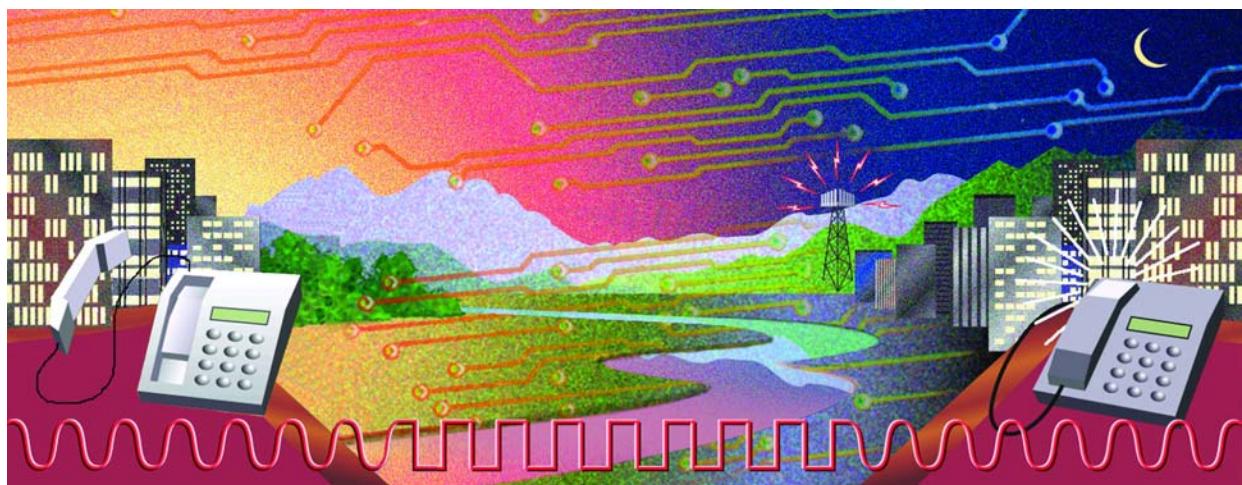


TELCEN.[®]



OneStream Programming Guide

Version 5

Document Control

Date	Document Version	Change	Authority
Oct 2006	Draft 1	First Draft Release of Document	
Jan 2007	Draft 2	Added Status web page	
May 2007	3	Added Flexible / Failover Routing	
Jan 2008	4	Added OneStream Versions	
Feb 2008	5	Added Virtual Extensions / s routing	

EC Declaration of Conformity

**EC Declaration Of Conformity
to R &TTE Directive 1999/5/EC**

Manufacturer: TelecomFM Development Ltd
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Product/Apparatus: Onestream

Type Number: FX

Declaration

I declare that above product conforms to all the applicable requirements of EU Directive1999/5/EC and is CE-marked accordingly:

Article 3.1a: EN 60950-1:2001 LVD Directive
EN 50392:2002 RF Exposure Evaluation

Article 3.1b: EN 301 489-7 V1.2.1 & EN 301 489-1 V1.6.1

Article 3.2: EN 301 511 V9.0.2

Guarantee

The OneStream is supplied with a 1-year return to base warranty which covers any defect in design or manufacture. No other warranties whatsoever are given.

If a faulty unit is required to be returned within the terms of the warranty a completed Returns Form (p.12) of Installation & user guide and must be returned with the faulty unit.

TelecomFM shall accept no liability for any error or damages of any kind resulting from the use of this document or the equipment it relates to.

No responsibility is assumed by TelecomFM for the use or reliability of the OneStream when used in a situation or with other equipment not supplied or specified by TelecomFM.

The wording in this document may change from time to time. Please refer to the TelecomFM web site www.telecomfm.co.uk for the latest release.

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1. Introduction

Please refer to the OneStream Hardware Installation Guide for instructions on the physical installation of the unit. In order to program the OneStream unit it must be connected to a 10Mb/s or 100Mb/s Local Area Network and you must have access to a PC connected to the same network. If no Local Area Network is available the OneStream unit can be configured by connecting it to a PC via a standard Ethernet Crossover cable.

All of the configuration options for the OneStream unit are controlled via a Web Configuration Utility that can be accessed from any standard web browser on your PC. No special software needs to be installed on the PC to access the Web Configuration Utility, however a OneStream Scanner utility is available to assist in finding the IP Addresses of any OneStream units installed on your Local Area Network. Refer to the following sections for more information.

2. Network Settings

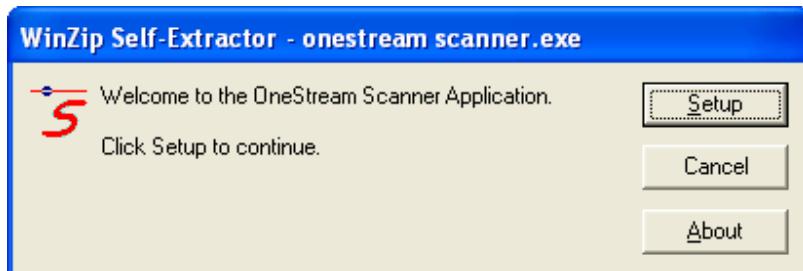
The Network settings for the OneStream Unit can be configured in 2 ways – static assignment or dynamic assignment. When the unit is powered on for the first time it will search for a DHCP Server and request an IP Address (ensure that the Ethernet Cable is connected to the unit **before** powering it on). If no DHCP Server is found then the unit will use its default IP Address, **192.168.0.1**. This Static IP Address can be changed from the web configuration utility.

3. Finding the IP Address of the OneStream unit

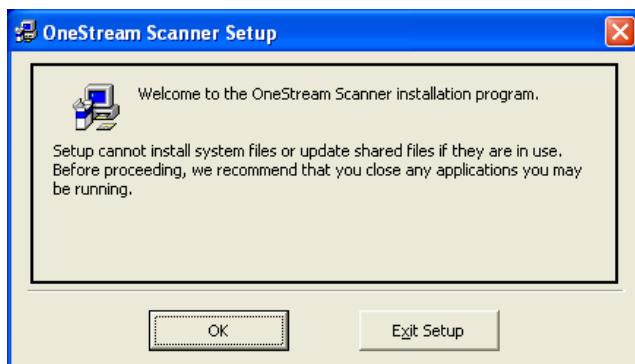
If the OneStream has been assigned an IP Address automatically from a DHCP Server or if a static IP Address has already been set then the IP Address of the unit can be found using the **OneStream Scanner** application, which is available to download from the Support section of the TelecomFM website, www.telecomfm.co.uk.

3.1 Installing the OneStream Scanner Application

- a. Double-click the "OneStream Scanner Setup.exe". The following dialog box will be displayed:



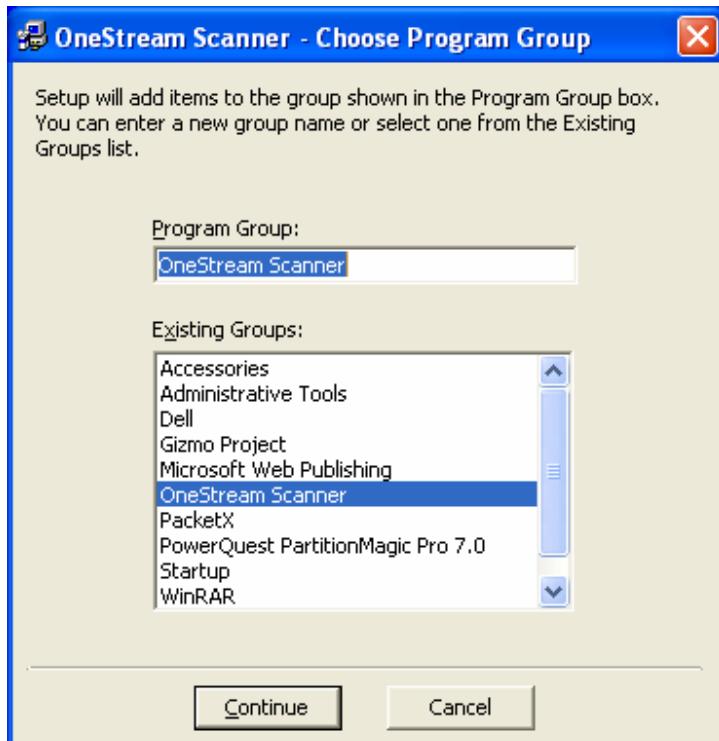
- b. Click the **Setup** button. After the files have been extracted the following will be displayed



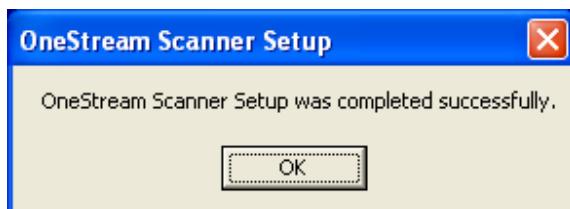
- c. Click the **OK** button. The following dialog will be displayed:



d. To install to the Default folder location click the Icon of a computer. The following dialog will be displayed:



e. Click the **Continue** button to start the installation. When the installation has finished the following dialog will be displayed:

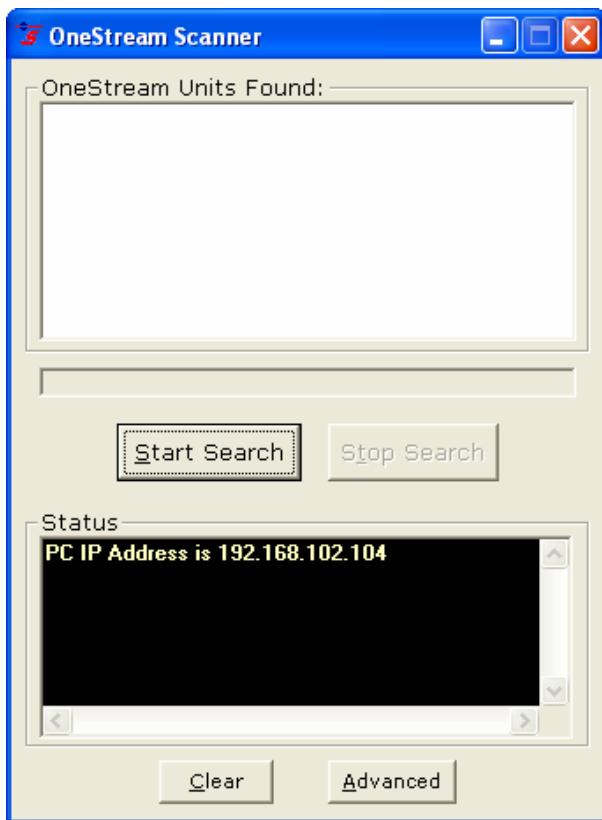


f. Click the **OK** button to exit the installer. The OneStream Scanner is now installed and ready to use.

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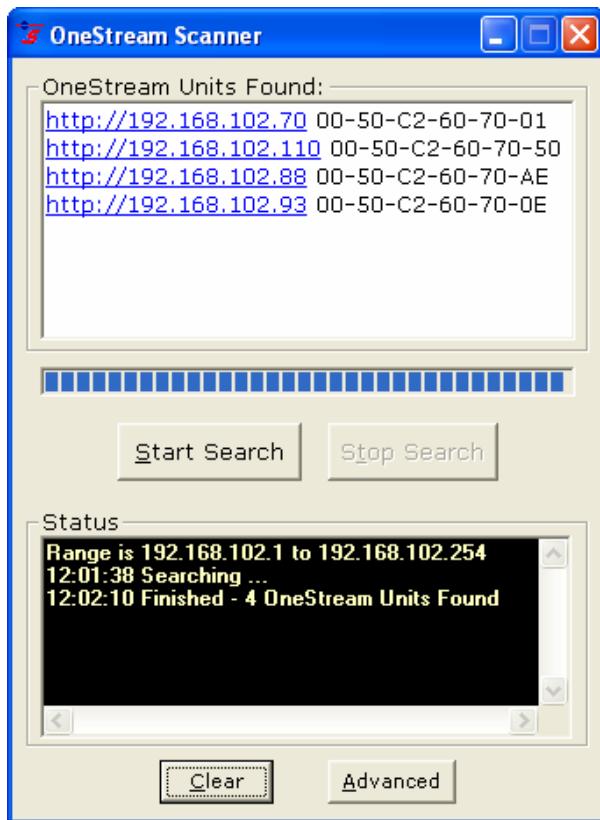
3.2 Using the OneStream Scanner Application

- a. Click on the **Start** menu, **All Programs**, **OneStream Scanner**, **OneStream Scanner** to start the application. The following window will appear:



- b. To scan the network that your PC is connected to for OneStream units using the default program options click the **Start Search** button. This will scan the Class C network subnet that the PC is in. For example, if the IP Address of the PC was 192.168.100.32 then the application would scan from 192.168.100.1 to 192.168.100.254.

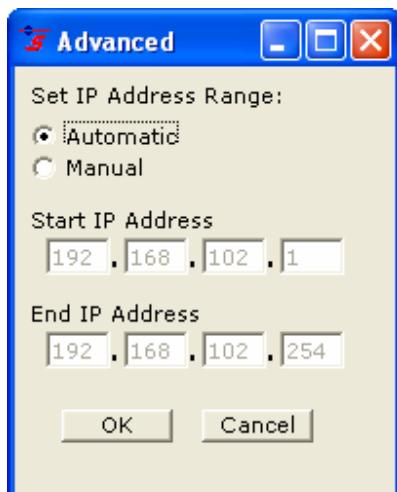
A progress bar will be displayed. Any OneStream units found in the network will be listed at the top of the application. The IP Address and MAC Address of each unit will be shown. When the progress bar reaches the right the scan is complete:



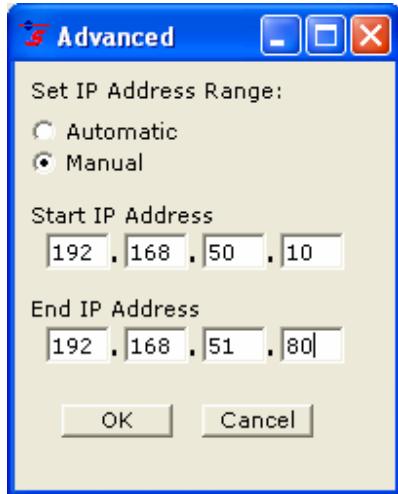
c. Click on the IP Address of the unit you wish to configure and the Web Configuration Utility will be launched.

d. *Using Advanced Options:*

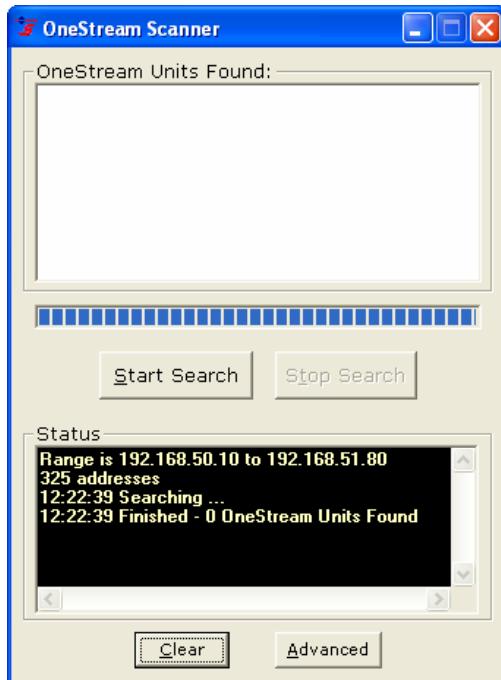
*To search an alternative range of IP Addresses to the default subnet click the **Advanced** button. The following dialog will be displayed:*



To specify a range of IP addresses to scan select the **Manual** option and enter the Start and End IP Addresses of the range. For example, to scan the range 192.168.50.10 – 192.168.51.80 the dialog would look as follows:



Click the **OK** button to return to the Main program window and then click the **Start Search** button to scan the new range of IP Addresses:



To return to the Automatic Search option click the **Advanced** button again. Select the **Automatic** option and click **OK**.

4. The Web Configuration Utility

The Web Configuration Utility is used to configure all of the options for the OneStream unit, including Networking, Interfaces, Routing, Security and Audio settings. In order to access the Web Configuration Utility the IP Address of the OneStream must be known. If the IP Address is not known refer to Section 3 above for instructions on finding the address.

4.1 Starting the Web Configuration Utility

- a. From any PC connected to the same network subnet as the OneStream unit open the Internet Explorer web browser.
- b. In the Address Bar of the Internet Explorer window type the IP Address of the OneStream unit and press the Enter key. You will be presented with the Login screen for the OneStream unit:



OneStream Programming Guide

- c. Enter the Password for the OneStream unit and click the **Login** button. The default password is **12345678**. If the password entered is correct you will be taken to the Welcome (Home) page
- d. You can now select from the Links on the left of the Page to configure the OneStream unit. The options are as follows:

Home

Return to the Welcome (Home) Page.

Groups

Configure the Physical Interfaces (GSM Modules, FXO and FXS Ports) and Virtual Interfaces (IP Connections).

Routes

Configure the Routing table that determines which calls are sent to which interfaces.

Audio

Configure the Audio Settings, including Volume Controls, Tone Selection, Audio Codec selections and SIP Call Limits.

Security

Configure Security Options including GSM Phone Lock / SIM Lock and change the Web Interface Password.

LAN Settings

Configure the Network Interface and select between Automatic (DHCP) and Static configurations.

Time/Date

Set the Time and Date, select the current Timezone and configure automatic Time and Date Updates (NTP).

Load/Save Config

Backup and Restore the unit's configuration or restore the Factory Default configuration. Can also be used to transfer configurations from one OneStream unit to another.

Update Firmware

Perform Local or Remote updates of the system software.

Diagnostics

Troubleshoots problems and collects trace.

Restart

Perform a restart of the unit.

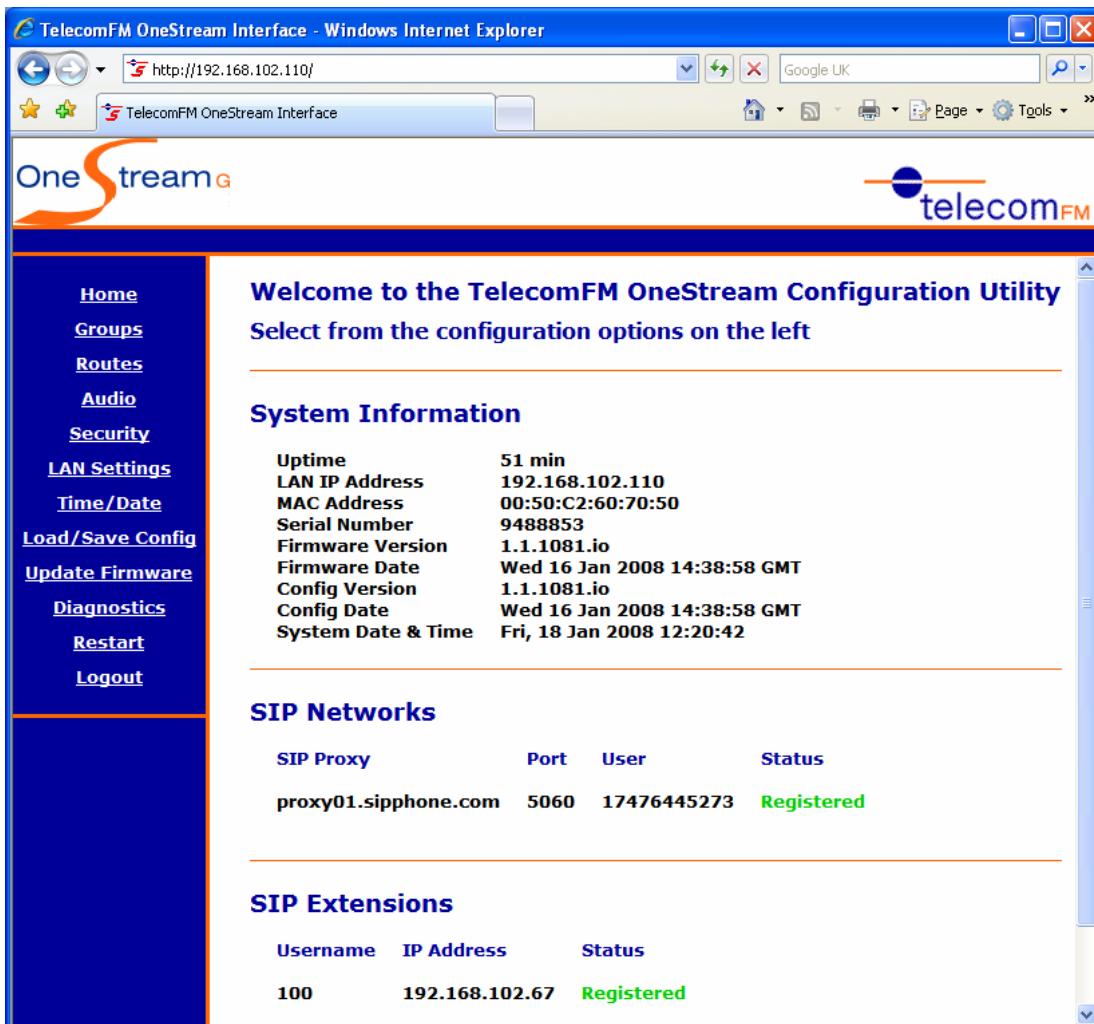
Logout

Logout and Exit from the Web Interface. Select this option when you have finished configuring the unit.

All of these Options are explained in more detail in the following pages.

OneStream Programming Guide

4.2 Welcome (Home) Page



The screenshot shows the 'TelecomFM OneStream Interface - Windows Internet Explorer' window. The URL in the address bar is <http://192.168.102.110/>. The title bar says 'TelecomFM OneStream Interface'. The main content area displays the following information:

Welcome to the TelecomFM OneStream Configuration Utility
Select from the configuration options on the left

System Information

Uptime	51 min
LAN IP Address	192.168.102.110
MAC Address	00:50:C2:60:70:50
Serial Number	9488853
Firmware Version	1.1.1081.io
Firmware Date	Wed 16 Jan 2008 14:38:58 GMT
Config Version	1.1.1081.io
Config Date	Wed 16 Jan 2008 14:38:58 GMT
System Date & Time	Fri, 18 Jan 2008 12:20:42

SIP Networks

SIP Proxy	Port	User	Status
proxy01.sipphone.com	5060	17476445273	Registered

SIP Extensions

Username	IP Address	Status
100	192.168.102.67	Registered

From the Welcome Page you can see the following information:

4.2.1 System Information

1. How long the unit has been running (Uptime)
2. The IP Address of the Unit
3. The MAC Address (unique network address) of the Unit
4. The Serial Number of the Unit
5. The Software Version Number (Firmware)
6. The Current Date and Time set on the Unit
7. The Status of all configured SIP Networks
8. The Status of all configured SIP Extensions

4.2.2 SIP Networks

The SIP Networks section displays the current status of all SIP network registrations that have been setup on the OneStream unit. This will show whether the unit has registered successfully or whether there is a problem that is preventing registration, such as the wrong password being entered in the Group or if a firewall is blocking the port being used for registration.

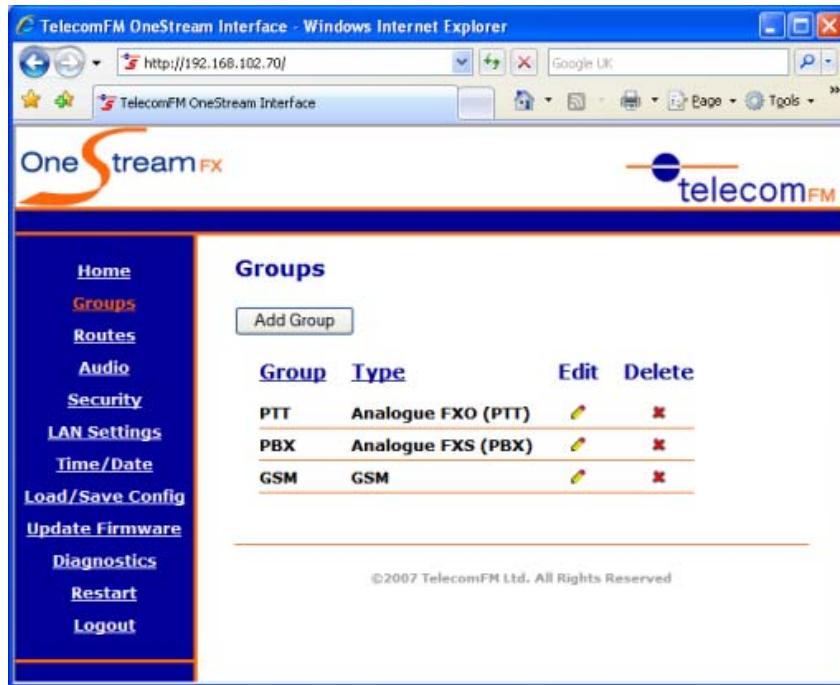
Note that only SIP groups where the "Registration Required" checkbox has been checked will be shown on this page.

4.2.3 SIP Extensions

The SIP Extensions section will list all SIP Extensions that have been setup using the Groups tab. The status of each extensions will be shown (whether it is registered successfully to the OneStream or not) and for each registered extension the IP Address will be displayed.

OneStream Programming Guide

4.3 Groups



The Groups Page allows you to setup groups of physical interfaces and configure IP connections. These Groups are then used later to setup call routing options.

There are 7 different types of Group (the available Groups will depend on the version of OneStream purchased):

GSM (*OneStream G / GFX / GBRI only*)

Group containing 1 or both of the OneStream's GSM Modules. By default, the unit has 1 GSM Group (named *GSM*) that contains both GSM modules.

Analogue FXS (PBX) (*OneStream GFX only*)

Group containing any number of FXS (PBX) ports (up to a maximum of 6). By default, the unit has 1 Analogue FXS Group (named *PBX*) that contains all 6 of the unit's FXS ports.

Analogue FXO (PTT) (*OneStream GFX only*)

Group containing any number of FXO (PTT) ports (up to a maximum of 6). By default, the unit has 1 Analogue FXO Group (named *PTT*) that contains all 6 of the unit's FXO ports.

SIP Network (*All OneStream versions*)

Group used for connection to a SIP Proxy or SIP based IP PBX in order to route IP Based Calls. By default, the unit has no SIP Network Groups.

SIP Extension (*All OneStream versions*)

Group used to allow a SIP device to connect to the OneStream as an extension. By default, the unit has no SIP Extension Groups.

H.323 (*All OneStream versions*)

Group used for connection to an H.323 Gatekeeper or H.323 based IP PBX in order to route IP Based Calls. By default, the unit has no H.323 Groups.

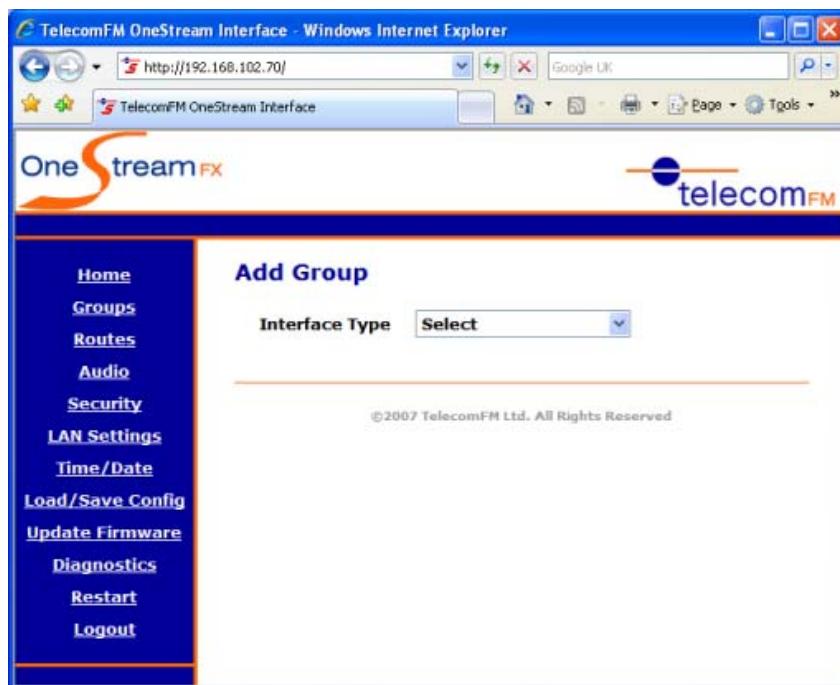
DISA (Direct Inward System Access) (All OneStream versions)

Group used to allow incoming calls to be answered and a secondary dialtone to be offered, allowing the caller to dial a new number and be routed accordingly. By default, the unit has no DISA Groups.

4.3.1 Adding a Group

To add a new group, use the following procedure:

- a. Click the **Groups** link from the left hand menu.
- b. Click the **Add Group** button. The following screen will be displayed:



- c. Select the required Interface Type from the drop-down list. The options for the type of interface selected will then be displayed.
- d. Enter a Name for the Group and fill in all of the required options – these options are described in detail for each Interface Type below.
- e. Click the **Add** button to add the new group. Click the **Cancel** button to undo any entry.

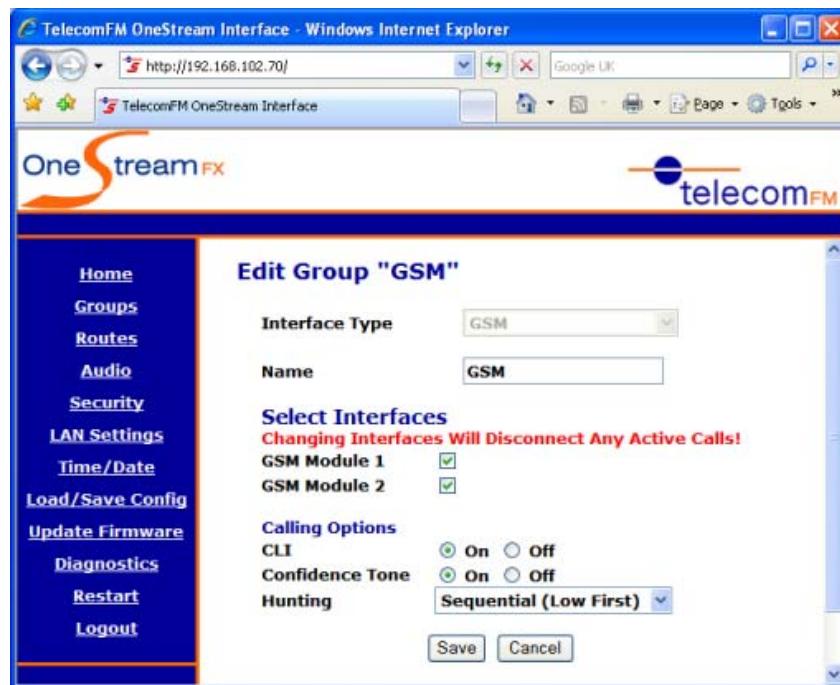
Note that if you add a group of type GSM, FXS or FXO the OneStream will reinitialize after you click Add and any active calls will be dropped.

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4.3.2 Editing an Existing Group

To edit an existing group, use the following procedure:

- a. Click the **Groups** link from the left hand menu.
- b. Click the Edit  icon next to the Group that you wish to modify. The following screen will be displayed:



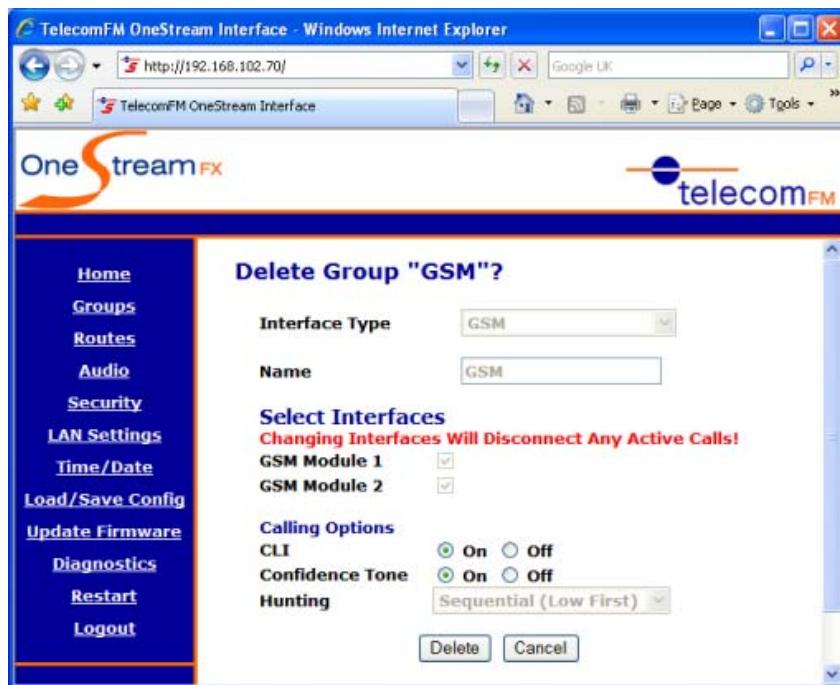
- c. Make any changes that are required – the options are described for each interface below.
- d. Click the **Save** button to apply the changes to the Group. Click the **Cancel** button to undo any changes made to the Group.

Note that if you change the interfaces that are in a group (of type GSM, FXS or FXO) the OneStream will reinitialize after you click Save and any active calls will be dropped.

4.3.3 Deleting a Group

To delete an existing group, use the following procedure:

- a. Click the **Groups** link from the left hand menu.
- b. Click the Delete  icon next to the Group that you wish to remove. The following screen will be displayed:



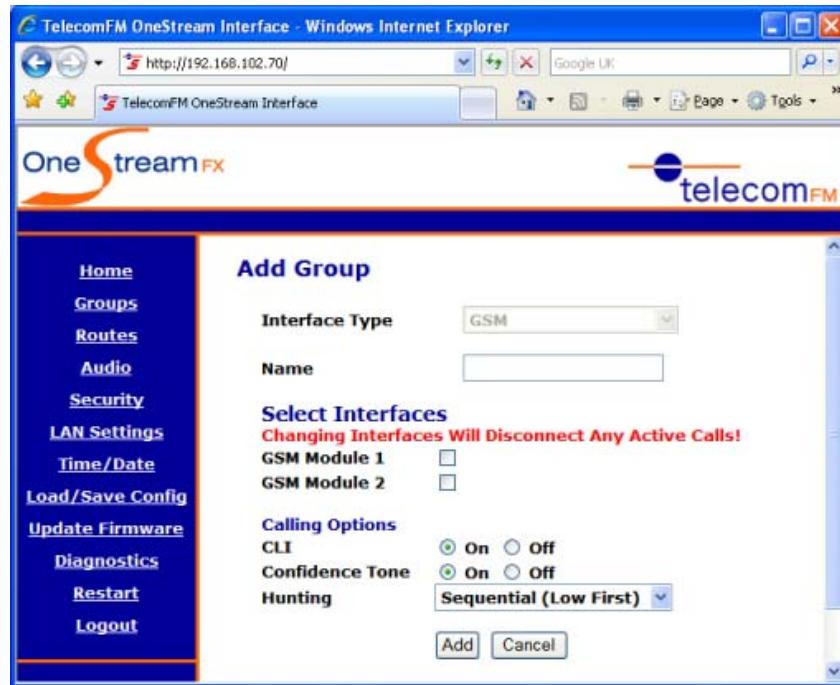
- c. To delete the Group click the **Delete** button. To return to the Groups page without deleting the Group click the **Cancel** button.

Note that once a Group has been Deleted it cannot be recovered.

4.3.4 Group Options

The following are the Group options available for each of the different interface types:

4.3.4.1 GSM (*OneStream G / GFX / GBRI only*)



Name

Enter a Name to identify this group. You cannot have 2 groups with the same name.

Select Interfaces

Place a tick in the checkbox next to each of the interfaces you wish to be used by this group. **Note that each interface can only be selected in 1 Group.**

CLI

Controls CLI Presentation for Outgoing GSM Calls. When turned on Called Parties will be able to see the CLI of the SIM attached to the GSM Module which made the call.

Confidence Tone

Controls whether a confidence tone (Call Progress Tone) is played during a GSM Call Setup. Turn On to Enable the Confidence Tone and Off to disable it.

Hunting

Select the hunting type required – this controls in which order interfaces are selected to send calls to. Options are:

- a. **Sequential (Low First)**
Calls are sent to the lowest available interface.
- b. **Sequential (High First)**
Calls are sent to the highest available interface.
- c. **Cyclic**
Calls are sent to interfaces in turn (i.e. A "Round Robin" setup).

4.3.4.2 Analogue FXS (PBX) (*OneStream GFX only*)



Name

Enter a Name to identify this group. You cannot have 2 groups with the same name.

Select Interfaces

Place a tick in the checkbox next to each of the interfaces you wish to be used by this group. **Note that each interface can only be selected in 1 Group.**

Hunting

Select the hunting type required – this controls in which order interfaces are selected to send calls to. Options are:

- a. **Sequential (Low First)**
Calls are sent to the lowest available interface.
- b. **Sequential (High First)**
Calls are sent to the highest available interface.
- c. **Cyclic**
Calls are sent to interfaces in turn (i.e. A "Round Robin" setup).

Outgoing Options

Select the Supervision options for Outgoing calls from the following:

- a. **No Supervision**
This is the default option and provides no supervision.
- b. **Loop Current Reversal On Connect/Disconnect**
Provides a Loop Current Reversal when the outgoing call is connected and when the call is disconnected.
- c. **Loop Current Drop On Disconnect**
Provides a Loop Current Drop when the outgoing call is disconnected.

Incoming Options

Select the Supervision options for Incoming calls from the following:

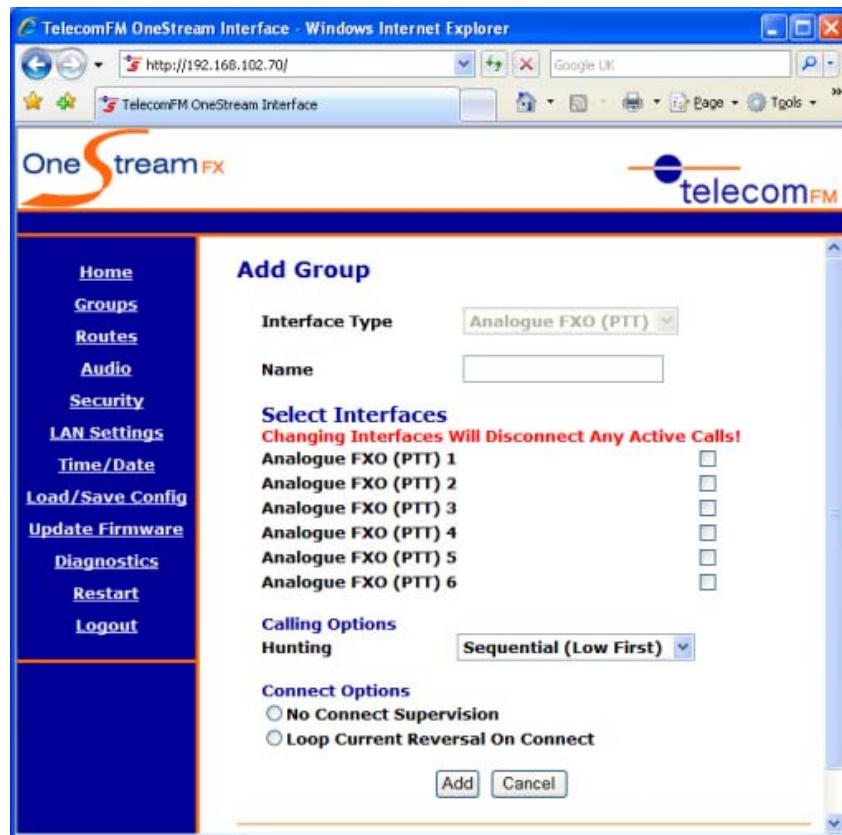
- a. **No Supervision**
This is the default option and provides no supervision.
- b. **Loop Current Reversal On Disconnect**
Provides a Loop Current Reversal when the incoming call is disconnected.
- c. **Loop Current Drop On Disconnect**
Provides a Loop Current Drop when the incoming call is disconnected.

CLI Options

Select the CLI Presentation options for Incoming calls from the following:

- a. **No CLI**
This is the default option and provides no CLI Presentation.
- b. **Loop Current Reversal Before CLI**
Provides a Loop Current Reversal before presenting the CLI.
- c. **Ring Before CLI**
Provides a Ring before presenting the CLI.

4.3.4.3 Analogue FXO (PTT) (*OneStream GFX only*)



Name

Enter a Name to identify this group. You cannot have 2 groups with the same name.

Select Interfaces

Place a tick in the checkbox next to each of the interfaces you wish to be used by this group. **Note that each interface can only be selected in 1 Group.**

Hunting

Select the hunting type required – this controls in which order interfaces are selected to send calls to. Options are:

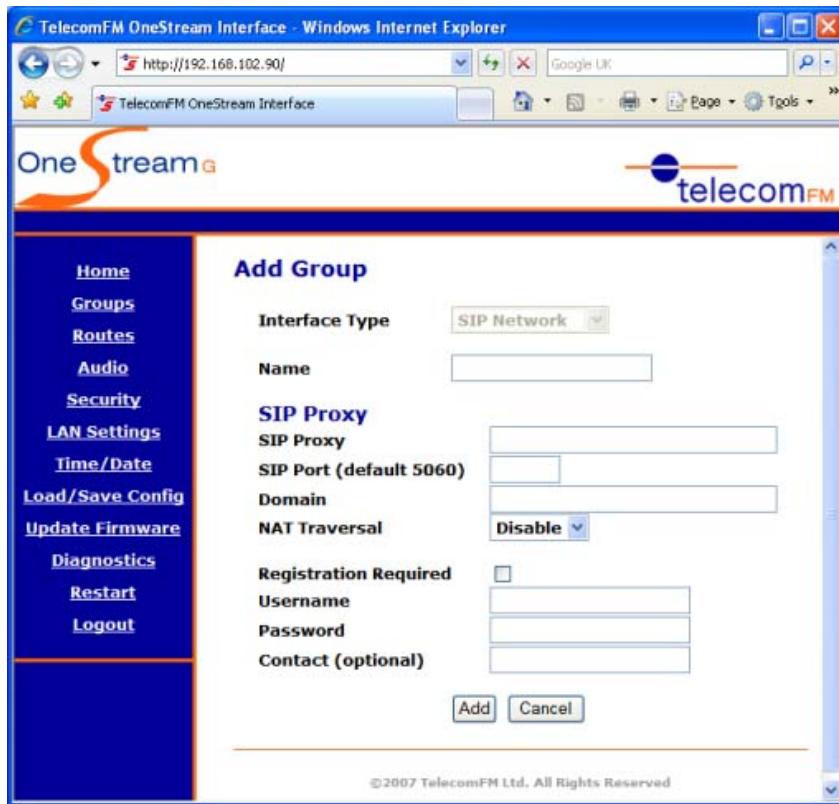
- a. **Sequential (Low First)**
Calls are sent to the lowest available interface.
- b. **Sequential (High First)**
Calls are sent to the highest available interface.
- c. **Cyclic**
Calls are sent to interfaces in turn (i.e. A "Round Robin" setup).

Connect Options

Select the Supervision options for calls from the following:

- a. **No Supervision**
This is the default option and provides no supervision.
- b. **Loop Current Reversal On Connect**
Provides a Loop Current Reversal when the call is connected.

4.3.4.4 SIP Network



The screenshot shows a Windows Internet Explorer window titled "TelecomFM OneStream Interface - Windows Internet Explorer". The URL in the address bar is "http://192.168.102.90/". The main content area displays the "One Stream" logo and the "telecomFM" logo. On the left, there is a vertical navigation menu with the following items: Home, Groups, Routes, Audio, Security, LAN Settings, Time/Date, Load/Save Config, Update Firmware, Diagnostics, Restart, and Logout. The "Update Firmware" item is currently selected and highlighted in red. The right side of the screen shows a configuration form titled "Add Group". The "Interface Type" dropdown is set to "SIP Network". The "Name" field is empty. Under the "SIP Proxy" section, the "SIP Proxy" field contains the IP address "192.168.102.90", the "SIP Port (default 5060)" field is empty, and the "Domain" field is empty. The "NAT Traversal" dropdown is set to "Disable". Under the "Registration Required" section, the "Registration Required" checkbox is unchecked. The "Username" and "Password" fields are empty, and the "Contact (optional)" field is empty. At the bottom of the form are two buttons: "Add" and "Cancel". A copyright notice at the bottom of the page reads "©2007 TelecomFM Ltd. All Rights Reserved".

Name

Enter a Name to identify this group. You cannot have 2 groups with the same name.

SIP Proxy

Enter the fully qualified domain name or IP Address of the SIP Proxy Server or SIP PBX that the calls should be routed to.

SIP Port

Enter the SIP Port that is used by the SIP Proxy / PBX. The default SIP Port is 5060.

Domain

(Optional) Enter the Domain Name of the SIP Proxy / PBX, if required.
Chasing

NAT Traversal

Select whether NAT (Network Address Translation) is required for this SIP Service. Normally, NAT is only set to **Enable** when the OneStream is behind a Firewall and the Proxy is located outside of the Firewall (for example when connecting with an Internet Telephone Service Provider).

Registration Required

Place a tick in this checkbox if the SIP Proxy / PBX requires that the OneStream register and login.

Username

(Optional) Enter the Username required by the SIP Proxy / PBX.

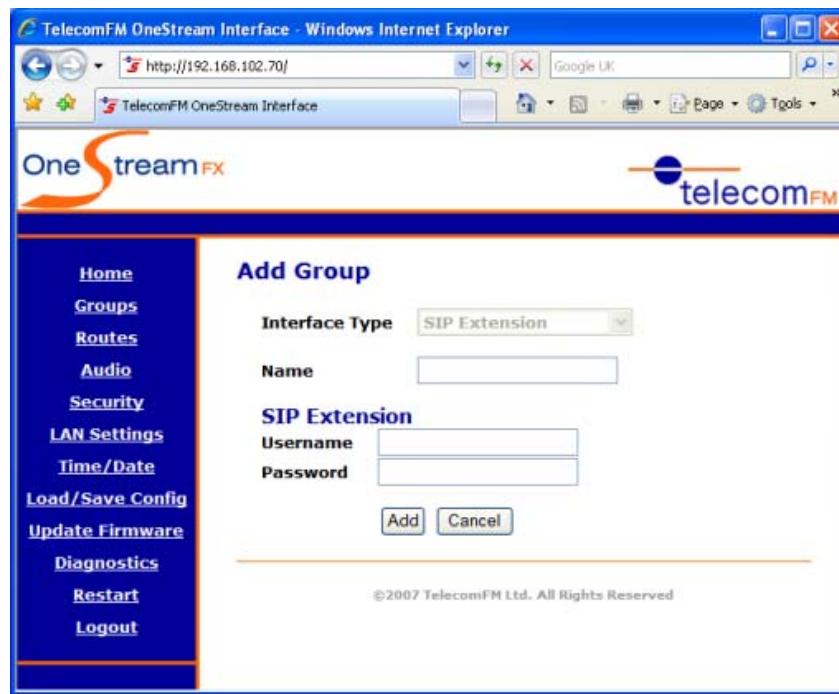
Password

(Optional) Enter the Password required by the SIP Proxy / PBX.

Contact

(Optional) Enter the contact extension that will be used by the remote SIP Proxy to send calls to OneStream. Leave this field blank to use the contact extension of "s" (an s must be entered in dialled numbers in the routing for calls from the remote SIP Proxy).

4.3.4.5 SIP Extension



Name

Enter a Name to identify this group. You cannot have 2 groups with the same name.

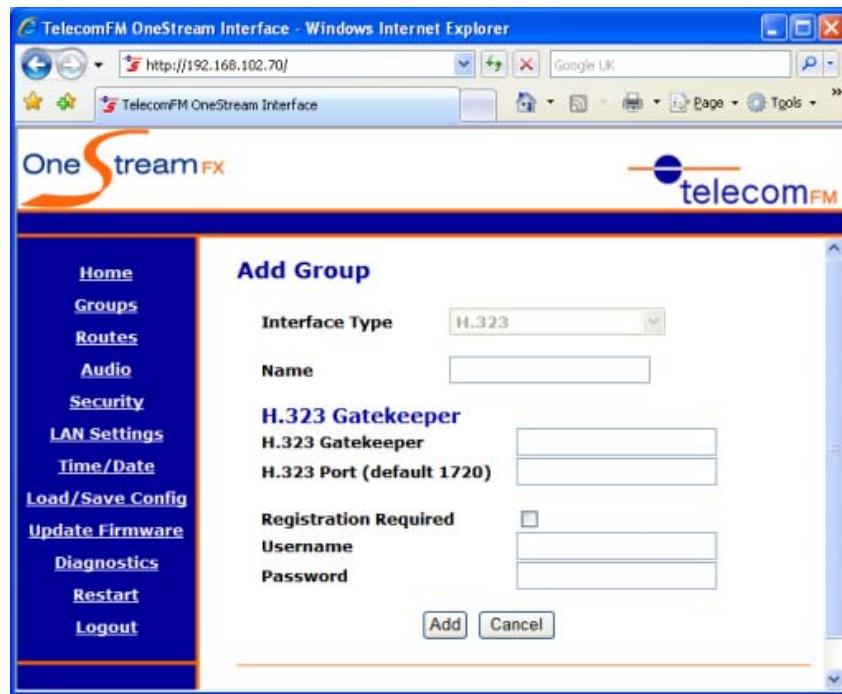
Username

Enter the Username that will be required for the SIP device to register with the OneStream.

Password

Enter the Password that will be required for the SIP device to register with the OneStream.

4.3.4.6 H.323



Name

Enter a Name to identify this group. You cannot have 2 groups with the same name.

H.323 Gatekeeper

Enter the IP Address of the H.323 Gatekeeper or H.323 PBX that the calls should be routed to.

H.323 Port

Enter the H.323 Port that is used by the H.323 Gatekeeper / PBX. The default H.323 Port is 1720.

Registration Required

Place a tick in this checkbox if the H.323 Gatekeeper / PBX requires that the OneStream register and login.

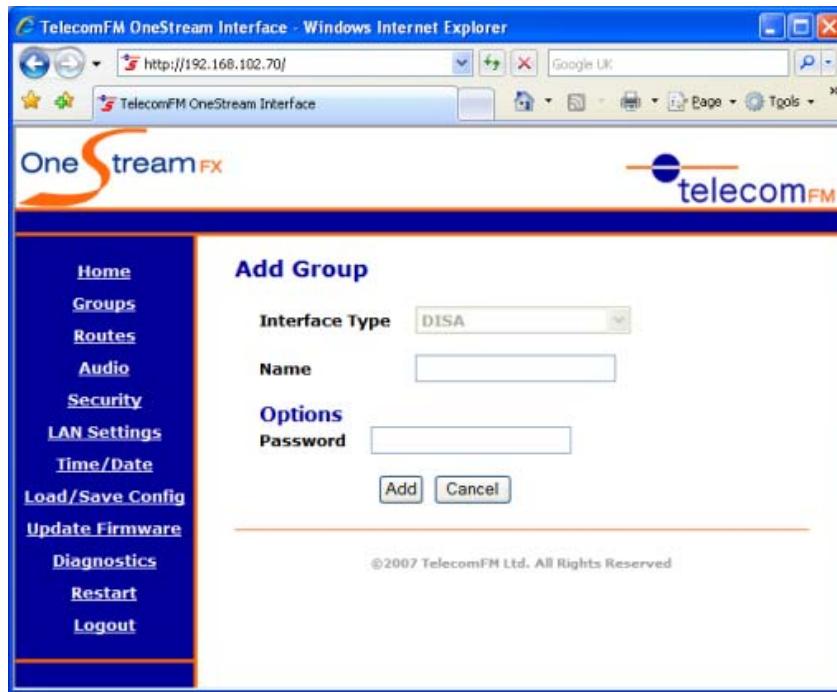
Username

(Optional) Enter the Username required by the H.323 Gatekeeper / PBX.

Password

(Optional) Enter the Password required by the H.323 Gatekeeper / PBX.

4.3.4.7 DISA (Direct Inward System Access)



Name

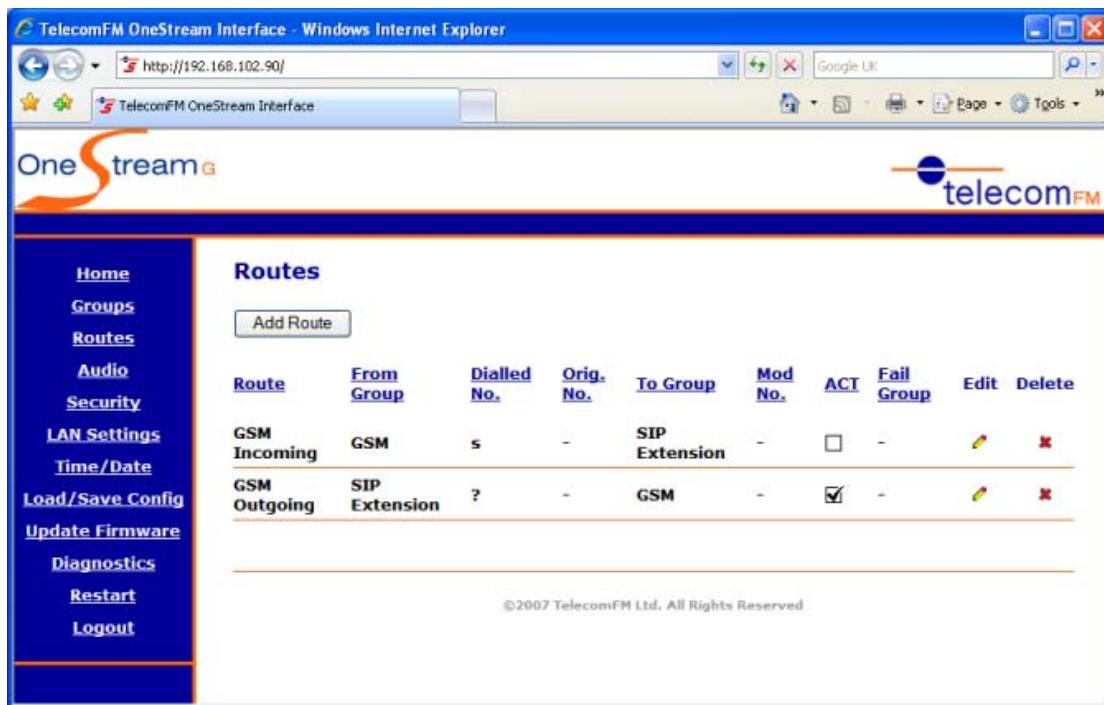
Enter a Name to identify this group. You cannot have 2 groups with the same name.

Password

Enter the Password that callers will be required to enter to access the system. This may be left blank (**IMPORTANT: If the password is left blank then all routes to the DISA Group should be restricted using an "Originating Number" otherwise the system would be left open to any callers.**)

After a caller is routed to a DISA Group they will hear a secondary dialtone. They must then enter the password followed by the # key. If the password is correct they can then dial the new number. If the password entered is incorrect then the caller will hear an interrupted (unavailable) tone.

4.4 Routes



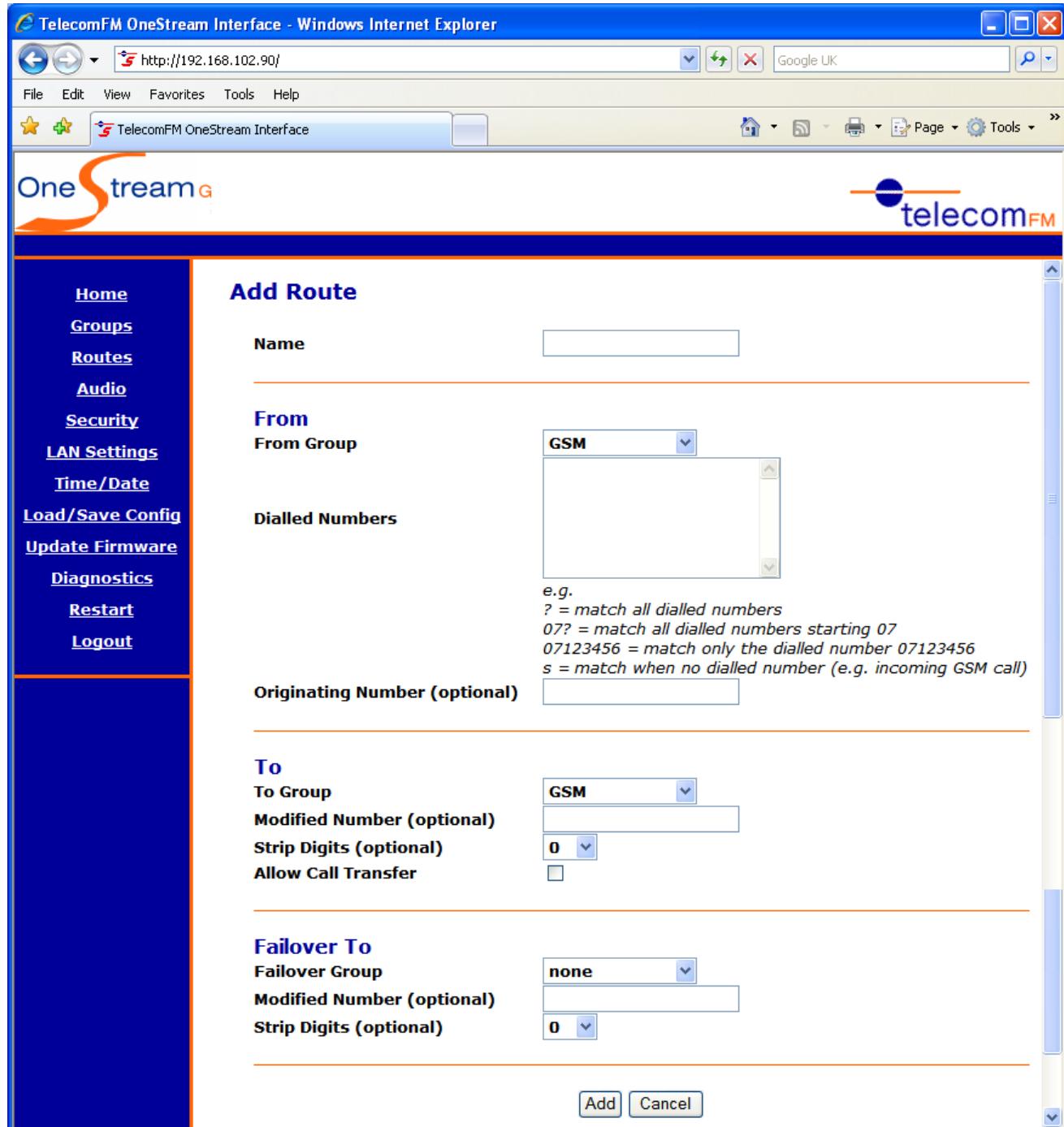
Route	From Group	Dialled No.	Orig. No.	To Group	Mod No.	ACT	Fail Group	Edit	Delete
GSM Incoming	GSM	s	-	SIP Extension	-	<input type="checkbox"/>	-		
GSM Outgoing	SIP Extension	?	-	GSM	-	<input checked="" type="checkbox"/>	-		

The Routes Page allows you to configure how the OneStream routes calls between Groups. Groups must already have been configured before the Routing can be setup (see the previous section for instructions on setting up Groups).

4.4.1 Adding a Route

To add a new Route, use the following procedure:

- a. Click the **Routes** link from the left hand menu.
- b. Click the **Add Route** button. The following screen will be displayed:



The screenshot shows the 'Add Route' configuration page within the TelecomFM OneStream Interface. The left sidebar contains a navigation menu with the following items:

- [Home](#)
- [Groups](#)
- [**Routes**](#)
- [Audio](#)
- [Security](#)
- [LAN Settings](#)
- [Time/Date](#)
- [Load/Save Config](#)
- [Update Firmware](#)
- [Diagnostics](#)
- [Restart](#)
- [Logout](#)

The main content area is titled 'Add Route'. It includes fields for 'Name' (with a text input box), 'From' (with a dropdown menu set to 'GSM' and a list box below it), 'Dialled Numbers' (with a text input box and a note explaining patterns like '?', '07?', '07123456', and 's'), 'Originating Number (optional)' (with a text input box), 'To' (with a dropdown menu set to 'GSM' and a list box below it, showing '0' selected), 'Failover To' (with a dropdown menu set to 'none' and a list box below it, showing '0' selected), and 'Buttons' at the bottom (labeled 'Add' and 'Cancel').

c. Fill in all of the required options. Depending on the Groups selected some options will not be available – these options will be greyed out. Options are as follows:

Name (*Required*)

Enter a Name to describe the Route.

From Section

The following 3 options apply to origin of the call:

From Group (*Required*)

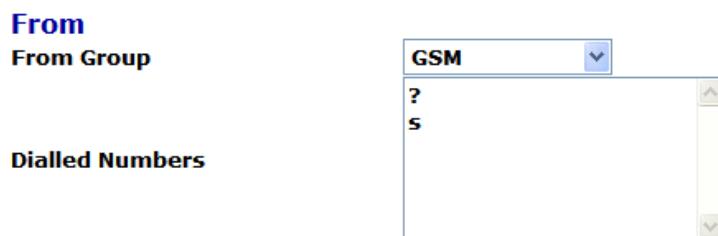
Select the Group that the Calls will originate from in the drop-down list.

Dialled Numbers (*Required*)

A list of dial prefix's to match. Enter 1 dial prefix on each line. Only if the number dialled matches an entry in this list is the Route applied. A question mark (?) is used to match any digits dialled. An s is used to match when there is no dialled number (e.g. an incoming call from GSM or FXO). Some examples:

Dialled Numbers	Result
s	Match when no dialled number
?	Match any dialled number
07?	Match any number starting 07
01753?	Match any number starting 01753
01753745000	Match only the number 01753745000
2345	Match only the number 2345

To create a “catch all” route that will route all calls enter dialled numbers ? and s, like this:



Originating Number (*Optional*)

If left blank, match calls from any number. If a number is entered here only calls from this number will be matched to this route. Wildcards are allowed. Some examples:

<i>Blank</i>	route calls from any number
01753745000	only route calls from 01753745000
01753?	only route calls from numbers starting with 01753

To Section

The following 3 options apply to the destination of the call:

To Group (*Required*)

The Group that calls will be sent to when this Route is matched.

Modified Number (*Optional*)

If left blank, the number will be called exactly as dialled. If a number is entered here this number will be called in place of the dialled number.

Strip digits (*Optional*)

Select the number of dialled digits to be removed from the beginning of the dialled number. For example, if Strip Digits is set to 2 and the number 012345678 is dialled the number the actual number called will be 2345678.

Allow Call Transfer (*Optional*)

Tick the allow call transfer check box to enable call transfer. Refer to Section 5.1 – Virtual Extensions for more information on this feature.

Failover To Section

The following 3 options will be used for the destination of the call if the Group selected in "To Group" is not available:

Failover Group (*Optional*)

If the Group selected as the "To Group" is unavailable (for example if all of the interfaces are Busy or is there is a fault with a SIP Network) calls will be sent to the Failover Group when this Route is matched.

Modified Number (*Optional*)

If left blank, the number will be called exactly as dialled. If a number is entered here this number will be called in place of the dialled number.

Strip digits (*Optional*)

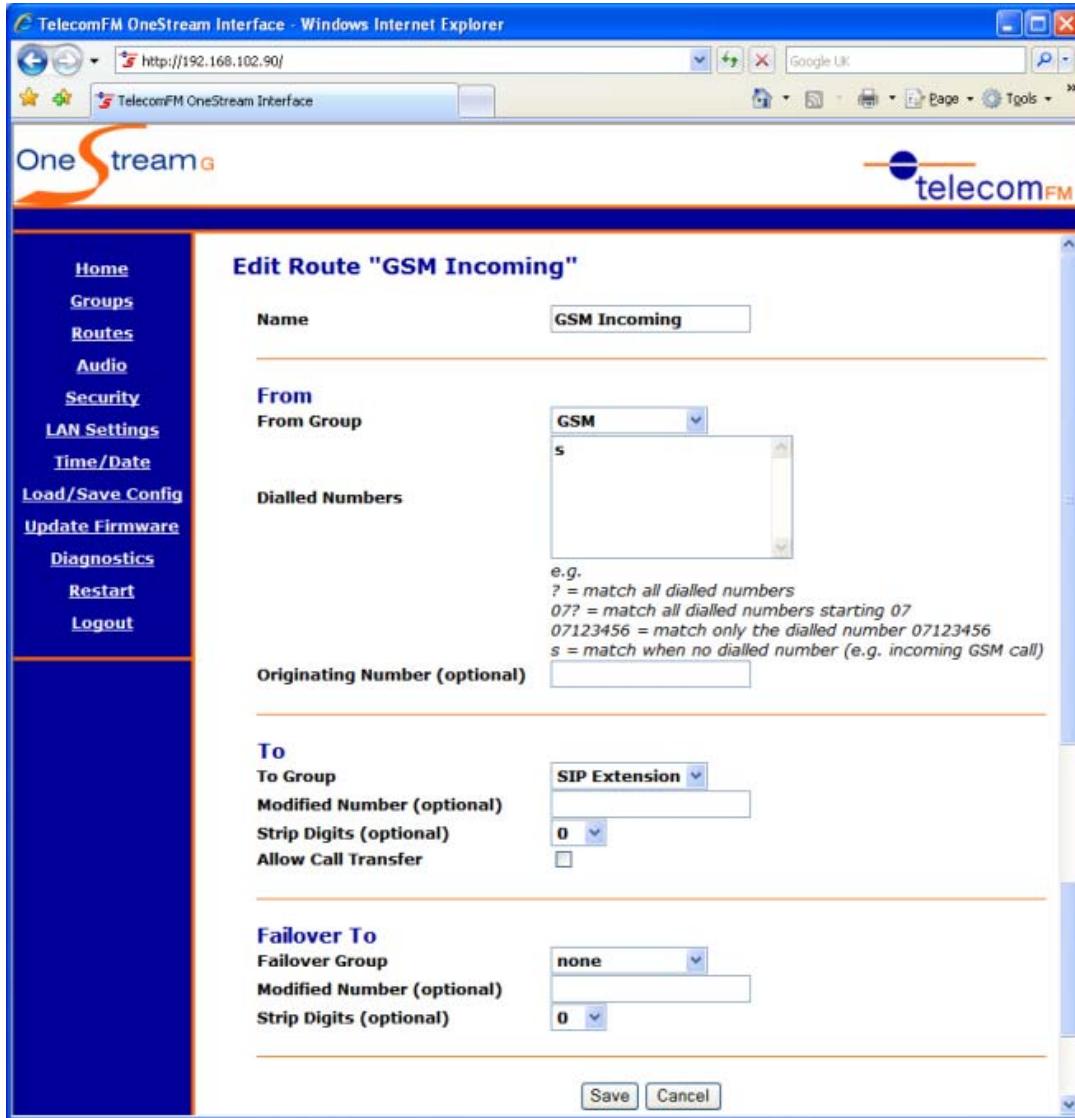
Select the number of dialled digits to be removed from the beginning of the dialled number. For example, if Strip Digits is set to 2 and the number 012345678 is dialled the number the actual number called will be 2345678.

- d. Click the **Add** button to add the new route to the Routing table. Click the **Cancel** button to return to the Routes page without adding the Route.

4.4.2 Editing An Existing Route

To edit an existing route, use the following procedure:

- a. Click the **Routes** link from the left hand menu.
- b. Click the Edit  icon next to the Route that you wish to modify. The following screen will be displayed:



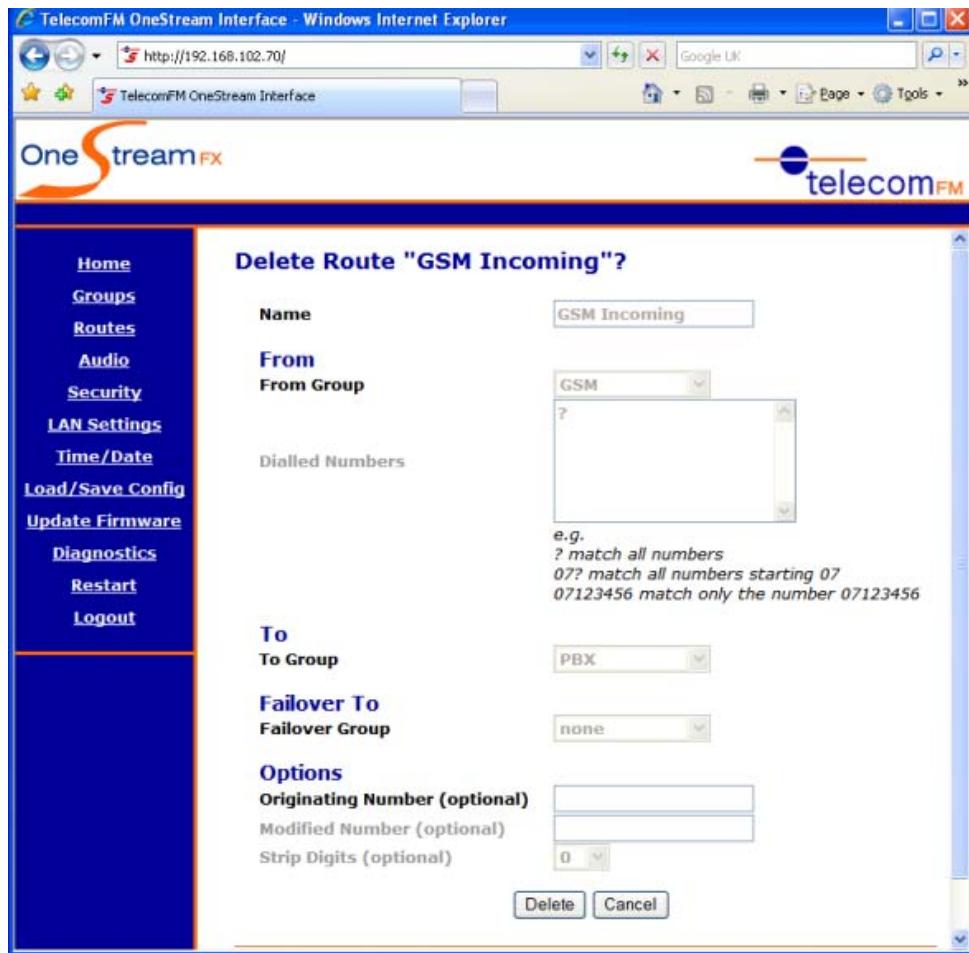
The screenshot shows the 'Edit Route "GSM Incoming"' configuration page. The 'From' section is set to 'GSM'. The 'Dialled Numbers' dropdown contains 'S'. The 'To' section is set to 'SIP Extension' with 'Strip Digits' set to '0'. The 'Failover To' section is set to 'none' with 'Strip Digits' set to '0'.

- c. Make any changes that are required to the Route – see the section on Adding a Route (above) for a description of all of the available options.
- d. Click the **Save** button to apply the changes to the Route. Click the **Cancel** button to undo any changes made to the Route.

4.4.3 Deleting A Route

To delete an existing route, use the following procedure:

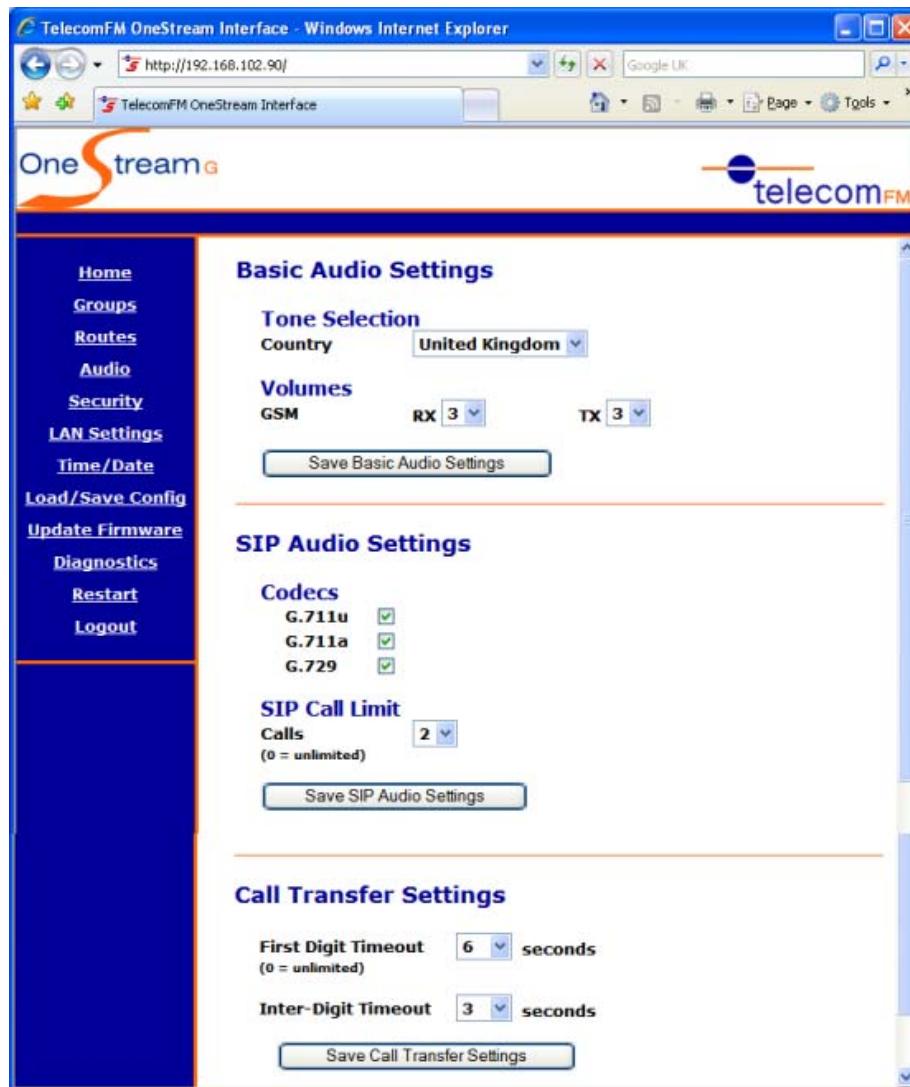
- a. Click the **Routes** link from the left hand menu.
- b. Click the Delete  icon next to the Route that you wish to remove. The following screen will be displayed:



- c. To delete the Route click the **Delete** button. To return to the Routes page without deleting the Route click the **Cancel** button.

Note that once a Route has been Deleted it cannot be recovered.

4.5 Audio



The Audio Page is divided into 3 sections as follows:

4.5.1 Basic Audio Settings

Tone Selection

Select the country that the OneStream unit is being installed into from the drop-down list. This will set the various tones the system generates (e.g. Dialtone) to emulate those of the local Telephone providers.

Volumes

Listed here will be all of the groups containing physical interfaces that have been set up on the Groups page. Each of these groups has a separate Receive (RX) and Transmit (TX) Volume control. Each volume control is adjustable from Level 1 (Quiet) to Level 5 (Loud). The default setting for all volumes is Level 3. It is recommended that you do not adjust the volume levels of any of the groups unless you are specifically experiencing a problem with sound levels.

Volume Level Example:

Calls are being made from a PBX attached to the FXS ports to the GSM modules. It is observed that users on phones attached to the PBX are unable to hear the people they called over GSM clearly. This could be fixed by either increasing the RX level for the GSM group or increasing the TX level for the PBX group or in a very extreme case by increasing both levels.

Note that changes to Volume Levels occur in Realtime when the **Save** button is pressed and will affect all active calls.

Save Basic Audio Settings – click the button to apply the basic audio settings.

4.5.2 SIP Audio Settings

Codecs

Place a tick in the checkbox of all Audio codecs that you wish to be supported for IP Calls. The default is to allow all codecs and unless you are experiencing problems with IP calls relating to a specific codec it is recommended that this is not changed.

Codecs available for selection are:

- G.711u - the G.711 U-law codec – 64Kbps
- G.711a - the G.711 A-law codec – 64Kbps
- G.729 - the G.729 codec – 8Kbps

When you have finished configuring the Audio Settings click the **Save** button. The new settings will be applied immediately.

To cancel any changes you have made to the settings click the **Cancel** button at any time.

SIP Call Limit

Sets the Maximum number of simultaneous SIP Calls that will be allowed. This can be useful to restrict the amount of bandwidth that the OneStream will use and to ensure that the best speech quality is achieved by not allowing more IP Calls than the available bandwidth can support.

Save SIP Audio Settings – click the button to apply the SIP Audio Settings.

4.5.3 Call Transfer Settings

First Digit Timeout

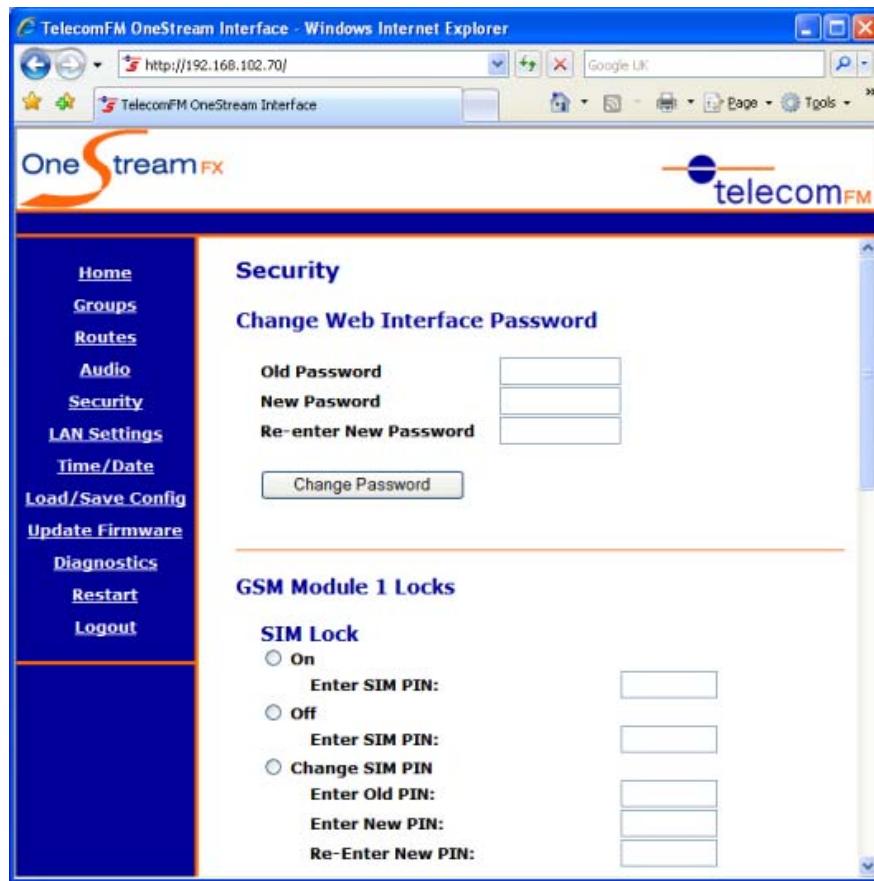
Sets the number of seconds that the OneStream will wait for a digit to be dialled after a * has been pressed to enter call transfer. The default is 6 seconds. An entry of 0 will wait indefinitely for the first digit to be dialled.

Inter-Digit Timeout

Sets the number of seconds that the OneStream will wait for more digits to be dialled during call transfer before attempting to connect the call. The default is 3 seconds.

Save Call Transfer Settings – click the button to apply the call transfer settings.

4.6 Security



The Security Page allows you to change the password required to access the web interface and to control SIM and Phone locking for the two GSM Modules (*OneStream G / GFX / GBRI only*). Options are as follows:

4.6.1 Change Web Interface Password

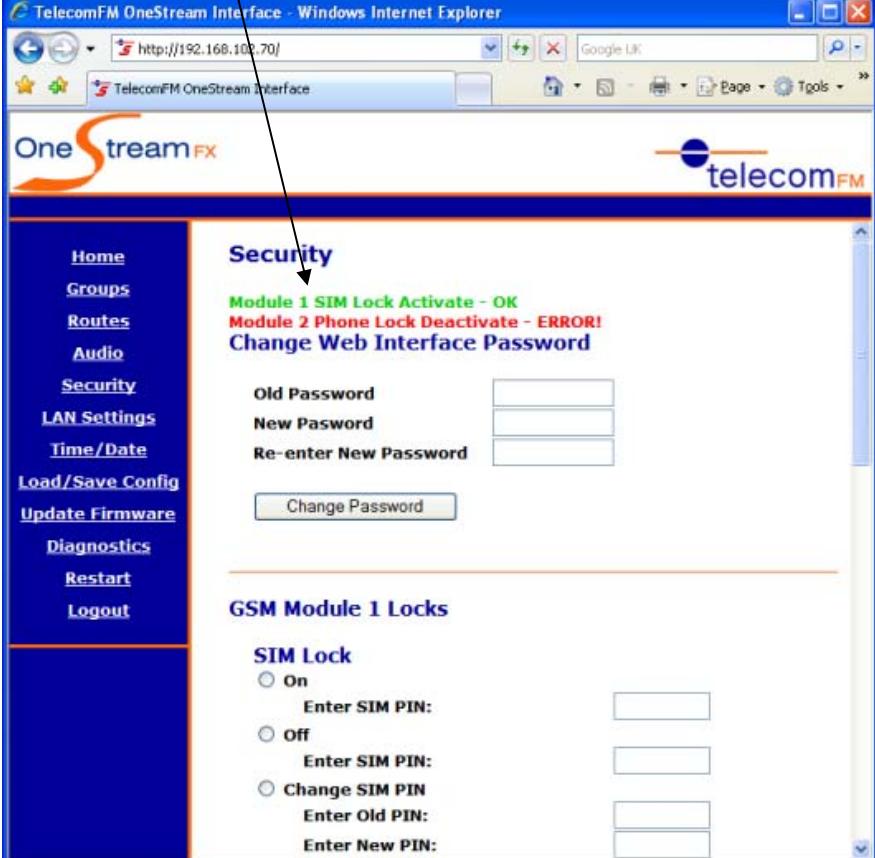
Change the Password that is used to access the Web Configuration Utility. Enter the Old Password (the default password is 12345678), the New Password and confirm the New Password in the Re-enter New Password box. Click the **Change Password** button to apply.

4.5.4 GSM Module 1 and GSM Module 2 Locks (*OneStream G / GFX / GBRI only*)

Controls the SIM Lock and Phone Lock for Module 1 and Module 2 respectively. The Locks are explained overleaf. Select only the options that you wish to change and click the **Save** button to apply all of the selected options (e.g. If SIM Lock for Module 1 is already turned on and you now wish to turn on SIM Lock for Module 2 there is no need to select the Module 1 SIM Lock again).

Click the **Cancel** button at any time to clear any changes that have been made.

After the **Save** button has been clicked the results of any locking will be shown at the top of the screen. For example, if **On** was selected for the SIM Lock for Module 1 (and the correct PIN was entered) and **Off** was selected for the Phone Lock for Module 2 (and the wrong PIN was entered) you would see the following result:



The screenshot shows the 'Security' page of the OneStream interface. The left sidebar menu is visible, with 'Security' highlighted. The main content area displays the following message:
Module 1 SIM Lock Activate - OK
Module 2 Phone Lock Deactivate - ERROR!
[Change Web Interface Password](#)

Below this, there are fields for changing the web interface password:

- Old Password
- New Password
- Re-enter New Password
-

GSM Module 1 Locks

SIM Lock

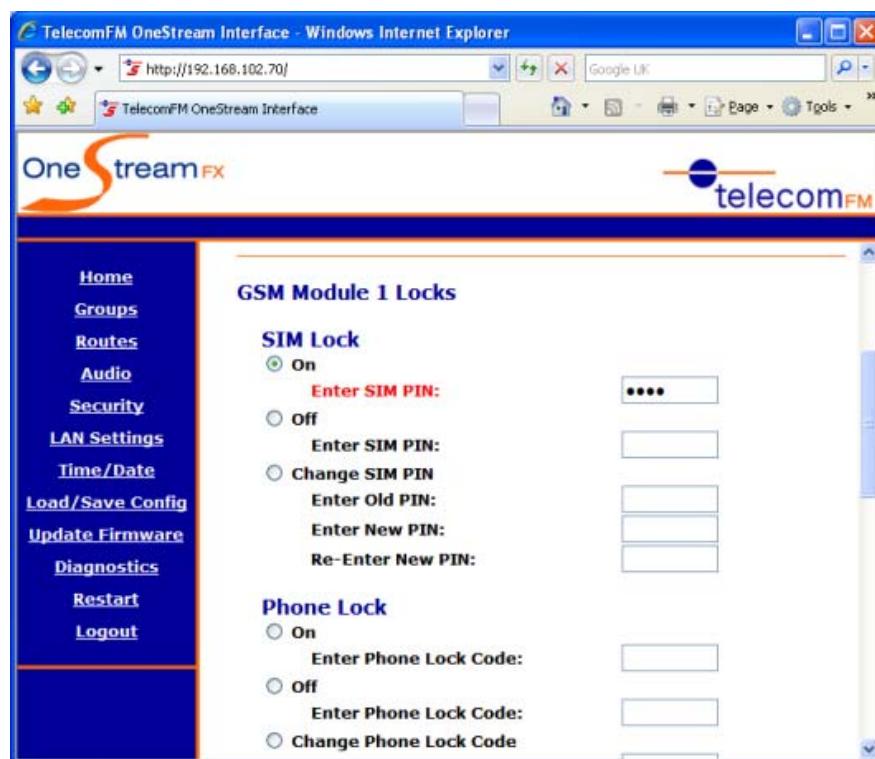
- On
Enter SIM PIN:
- Off
Enter SIM PIN:
- Change SIM PIN
Enter Old PIN:
Enter New PIN:

4.6.1.1 SIM Lock (*OneStream G / GFX / GBRI only*)

When SIM Lock is turned ON you will be required to enter the SIM PIN every time the OneStream unit is turned on - until the SIM PIN has been entered no calls will be allowed on the GSM module.

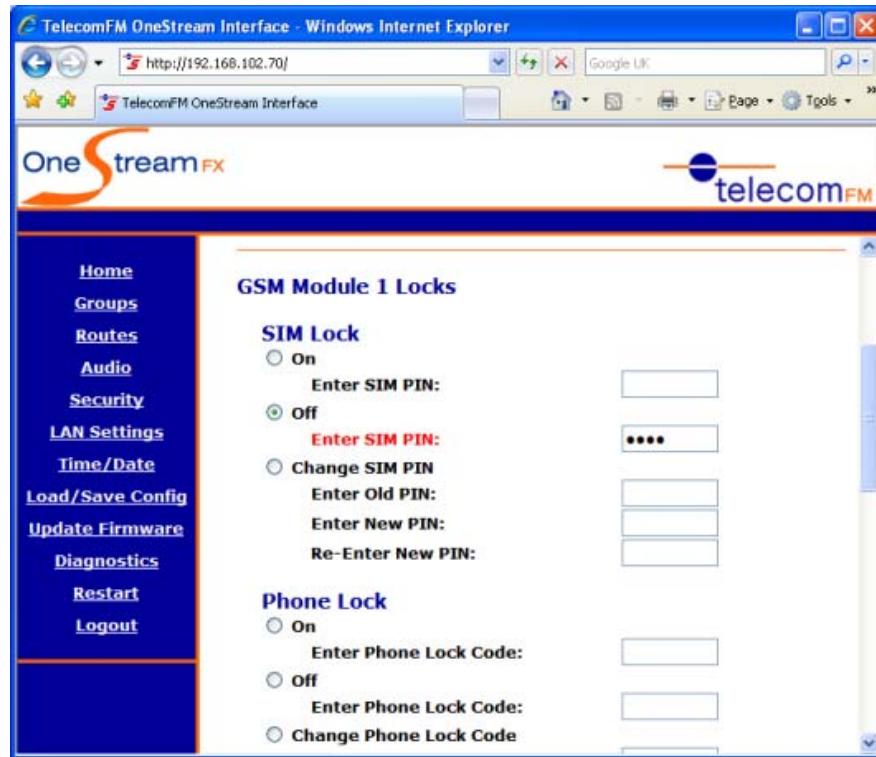
a. Turn SIM Lock ON

Select the **On** option and enter the current SIM PIN in the **Enter SIM PIN** box as shown below (the actual PIN will not be displayed on screen). The SIM Lock will be turned On when the **Save** button is clicked (if the entered PIN is correct).



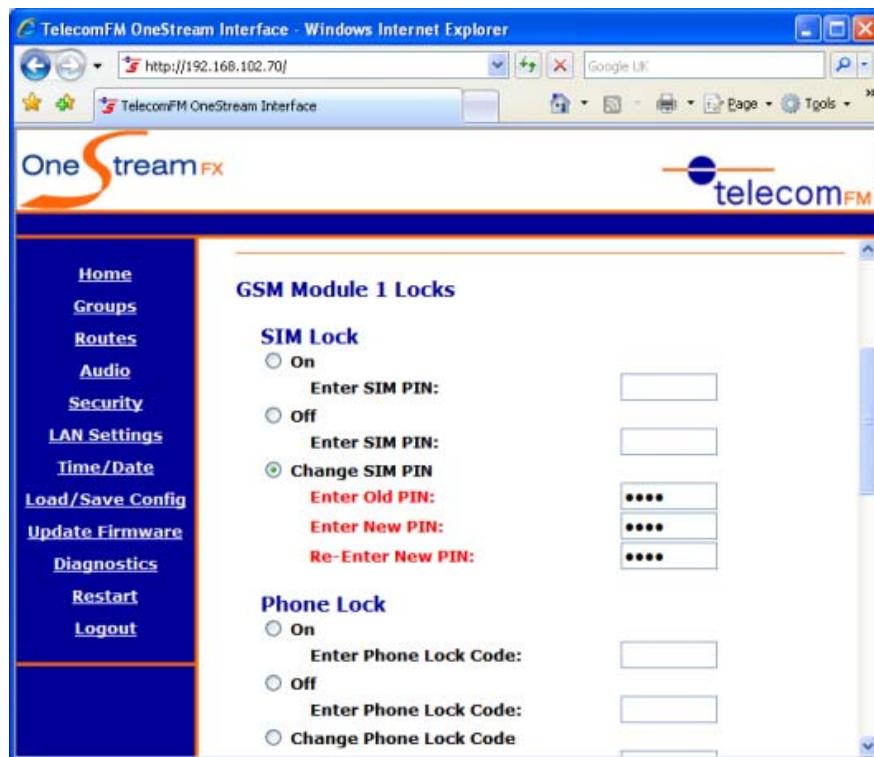
b. Turn SIM Lock OFF

Select the **Off** option and enter the current SIM PIN in the **Enter SIM PIN** box as shown below (the actual PIN will not be displayed on screen). The SIM Lock will be turned Off when the **Save** button is clicked (if the entered PIN is correct).



c. Change the SIM PIN

Select the **Change SIM PIN** option. Enter the current SIM PIN in the **Enter Old PIN** box. Enter the required New SIM PIN (must be between 4 and 8 digits) in both the **Enter New PIN** and **Re-Enter New PIN** boxes as shown below (the PINs will not be displayed on screen). The SIM PIN will be changed when the **Save** button is clicked (if the Old PIN that was entered is correct).



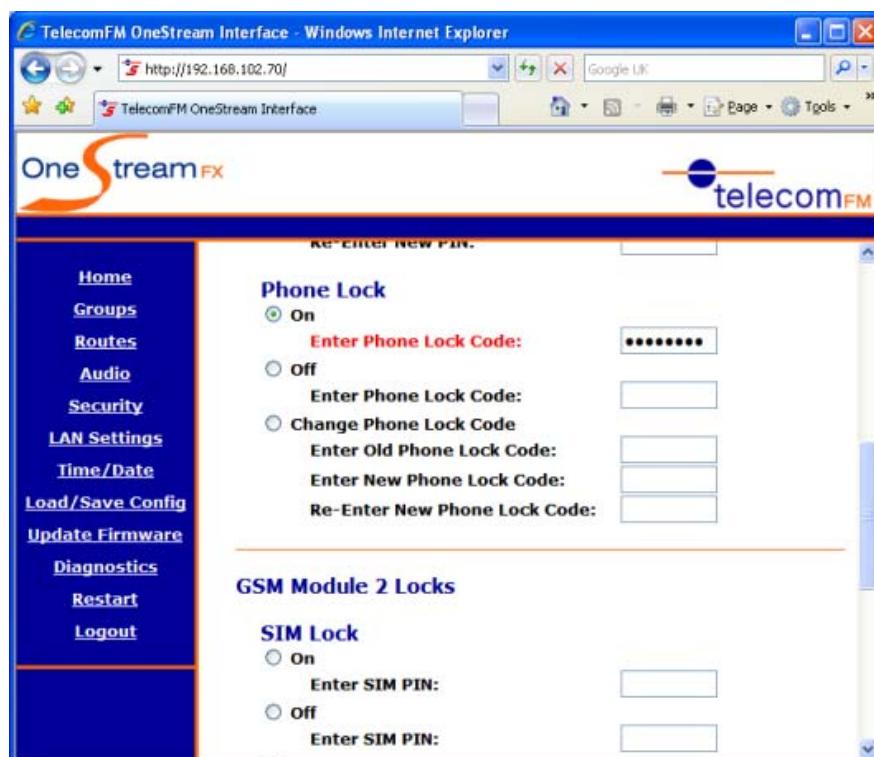
The screenshot shows the 'GSM Module 1 Locks' configuration page. On the left, there is a vertical menu bar with the following items: Home, Groups, Routes, Audio, Security, LAN Settings, Time/Date, Load/Save Config, Update Firmware, Diagnostics, Restart, and Logout. The 'Security' item is currently selected. The main right-hand panel displays the 'GSM Module 1 Locks' section. Under the 'SIM Lock' heading, the 'Change SIM PIN' option is selected. The 'Enter Old PIN' field contains '*****'. Below it, the 'Enter New PIN' and 'Re-Enter New PIN' fields both contain '*****'.

4.6.1.2 Phone Lock (*OneStream G / GFX / GBRI only*)

When Phone Lock is turned ON the GSM Module will be locked to the SIM that is currently inserted. If you wish to use a different SIM with the module you will be first required to enter the Phone Lock Code – until the Code is entered no calls will be allowed on this module.

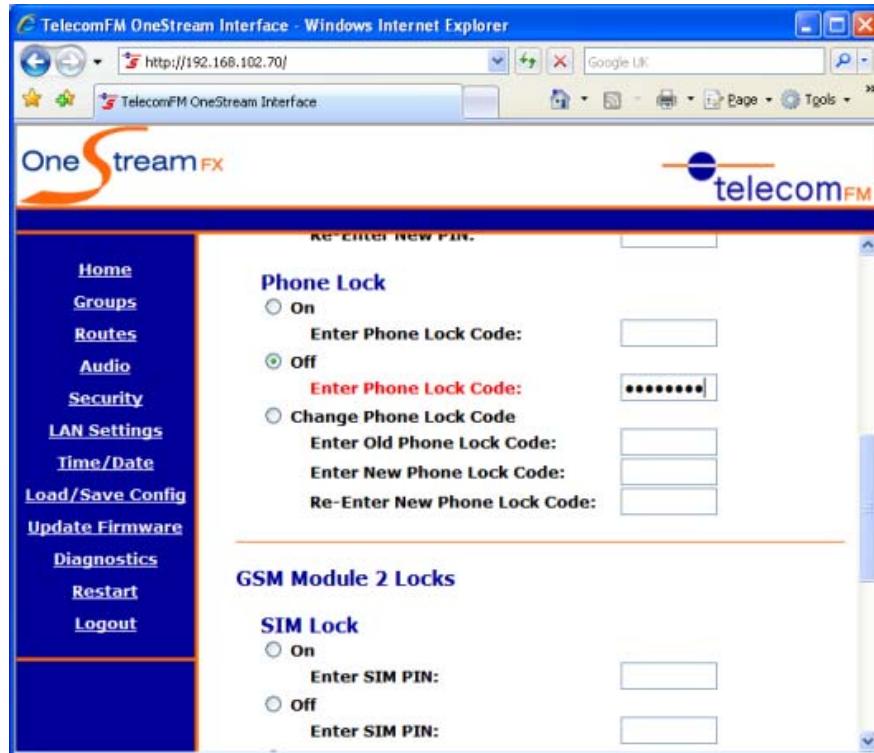
a. Turn Phone Lock ON

Select the **On** option and enter the Phone Lock Code in the **Enter Phone Lock Code** box as shown below (the actual Code will not be displayed on screen). The default Phone Lock Code is 12345678. The Phone Lock will be turned On when the **Save** button is clicked (if the entered Code is correct).



b. Turn Phone Lock OFF

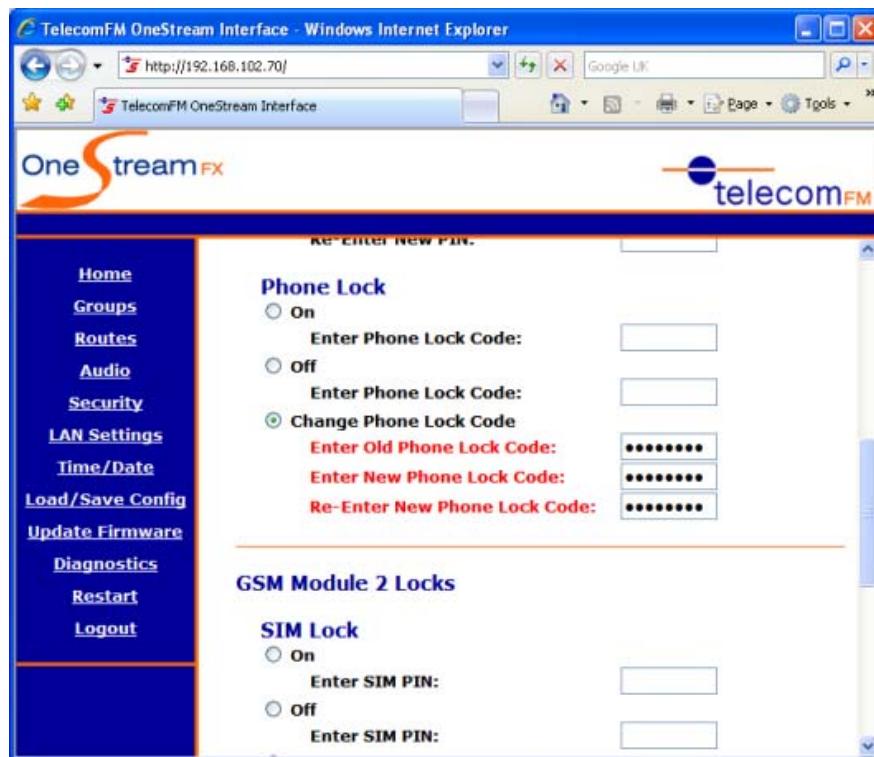
Select the **Off** option and enter the Phone Lock Code in the **Enter Phone Lock Code** box as shown below (the actual Code will not be displayed on screen). The default Phone Lock Code is 12345678. The Phone Lock will be turned Off when the **Save** button is clicked (if the entered Code is correct).



The screenshot shows the 'Phone Lock' configuration page within the TelecomFM OneStream Interface. On the left, a vertical menu bar lists various configuration options: Home, Groups, Routes, Audio, Security, LAN Settings, Time/Date, Load/Save Config, Update Firmware, Diagnostics, Restart, and Logout. The 'Security' option is currently selected. The main right-hand panel is titled 'Phone Lock'. It contains three radio button options: 'On', 'Off', and 'Change Phone Lock Code'. The 'Off' option is selected, and its corresponding input field contains the code '*****'. Below this, there are fields for 'Enter Old Phone Lock Code', 'Enter New Phone Lock Code', and 'Re-Enter New Phone Lock Code', all of which are currently empty. A horizontal line separates this section from the 'GSM Module 2 Locks' section. In the 'GSM Module 2 Locks' section, there are two radio button options: 'On' and 'Off'. The 'Off' option is selected, and its corresponding input field contains the code '*****'. The browser address bar at the top shows the URL as http://192.168.102.70/.

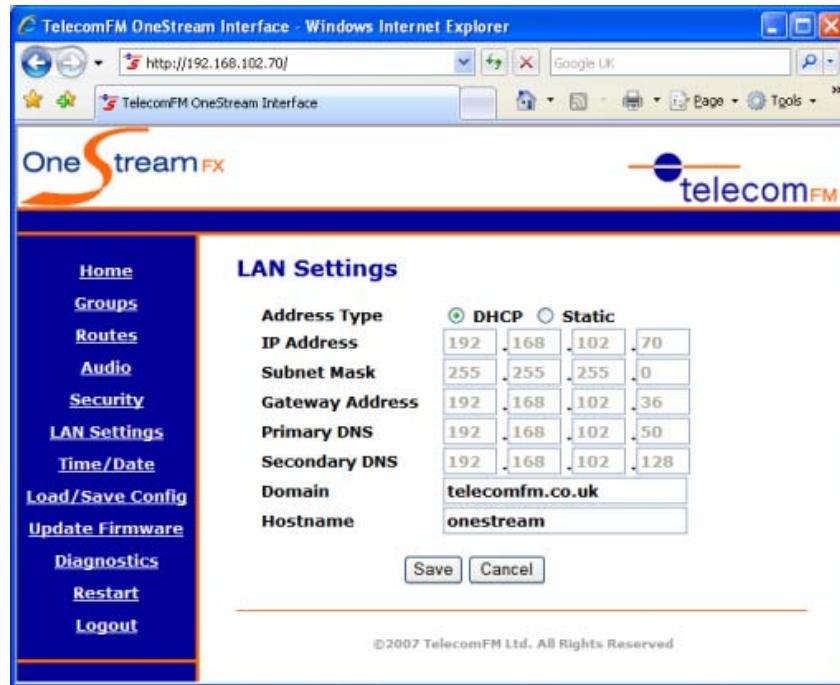
c. Change the Phone Lock Code

Select the **Change Phone Lock Code** option. Enter the current Phone Lock Code in the **Enter Old Phone Lock Code** box (the default code is 12345678). Enter the required New Phone Lock Code (must be between 4 and 8 digits) in both the **Enter New Phone Lock Code** and **Re-Enter New Phone Lock Code** boxes as shown below (the Codes will not be displayed on screen). The Phone Lock Code will be changed when the **Save** button is clicked (if the Old Code that was entered is correct).



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4.7 LAN Settings



The LAN Settings Page allows you to configure the OneStream unit to use either Automatic or Static networking and to enter all required network settings when using Static networking.

Options are as follows:

Address Type

a. DHCP

Select this option if the network the OneStream is connected to has a DHCP Server that assigns IP Addresses automatically. When this option is selected no further information needs to be entered on the Network Page. This is the default option.

b. Static

Select this option when no DHCP server is available on the network that the OneStream is connected to. When this option is selected the static network options must also be entered.

IP Address (*Static* Address Type only)

Enter the IP Address that the OneStream should use. Ensure that this IP Address is not currently in use on the network – if in doubt consult with the Network Administrator.

Subnet Mask (*Static* Address Type only)

Enter the Subnet Mask for the Network that the OneStream is connected to – if in doubt consult with the Network Administrator.

Gateway Address (*Static* Address Type only)

Enter the IP Address of the Default Gateway for the network.

Primary DNS (*Static* Address Type only)

Enter the IP Address of the Primary DNS Server for the network.

Secondary DNS (*Static* Address Type only)

(Optional) Enter the IP Address of the Secondary DNS Server for the network.

Domain (*Static* Address Type only)

Enter the default Domain for the network.

Hostname (*Static* Address Type only)

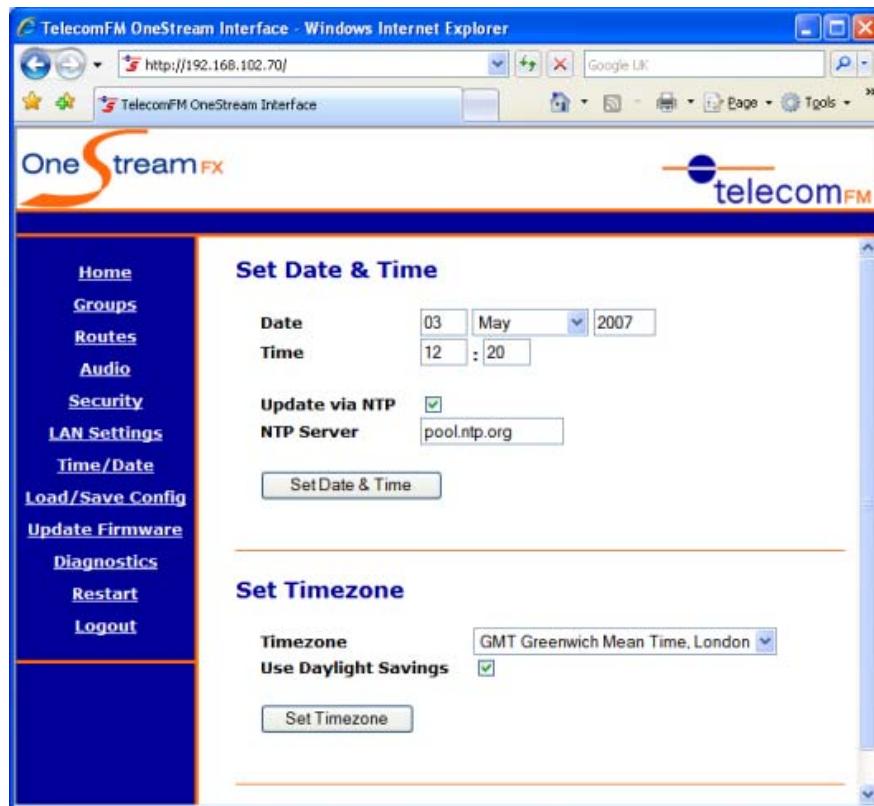
Enter the Hostname that should be used by the OneStream unit on the network.

When you have finished configuring the Network Settings click the **Save** button. The OneStream unit must be restarted to apply the new settings.

To cancel any changes you have made to the settings click the **Cancel** button at any time.

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4.8 Time / Date



The Time / Date Page allows you to perform the following operations:

4.8.1 Set Date & Time

The current date and time can be set here. For the date, the Day is entered, the Month is selected from the drop-down list and then the year is entered in full e.g. 2006. For the time, the hour is entered and then the minutes. The time is in 24-hour format only.

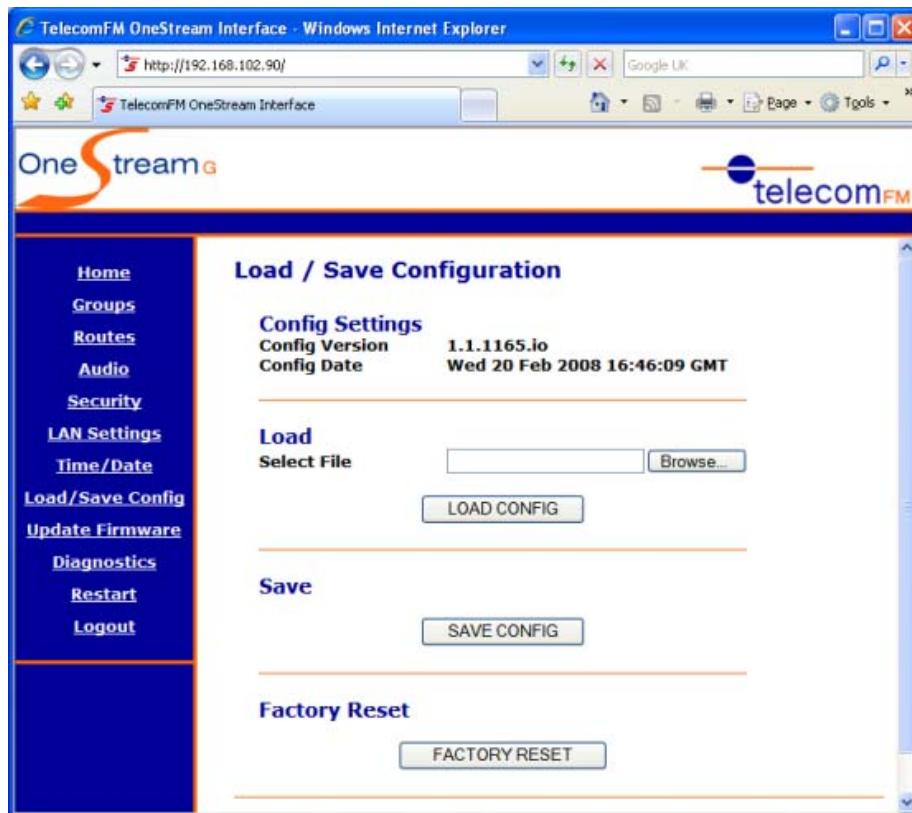
The date and time can be automatically updated via an NTP server. If the OneStream unit is able to connect to the Internet then the default NTP server (pool.ntp.org) can be used. Alternatively if an NTP server is available on the Local Network then its address can be entered in the **NTP Server** box. To enable the automatic update place a tick in the **Update via NTP** checkbox.

When you have finished configuring the Date and Time Settings click the **Set Date & Time** button. The new date and time settings will be applied immediately.

4.8.2 Set Timezone

The Timezone that the unit is located in can be set from here. Select your Timezone from the drop-down list. Choose the **Use Daylight Savings** checkbox to have the OneStream unit automatically adjust for daylight savings time in the summer. Click the **Set Timezone** button to apply the new settings – the system time will be adjusted immediately to reflect the change in Timezone.

4.9 Load/Save Config



The Load/Save Config Page allows you to Backup the configuration of the OneStream unit, Restore a previously saved configuration or restore the unit to a Factory Default configuration.

4.9.1 Load

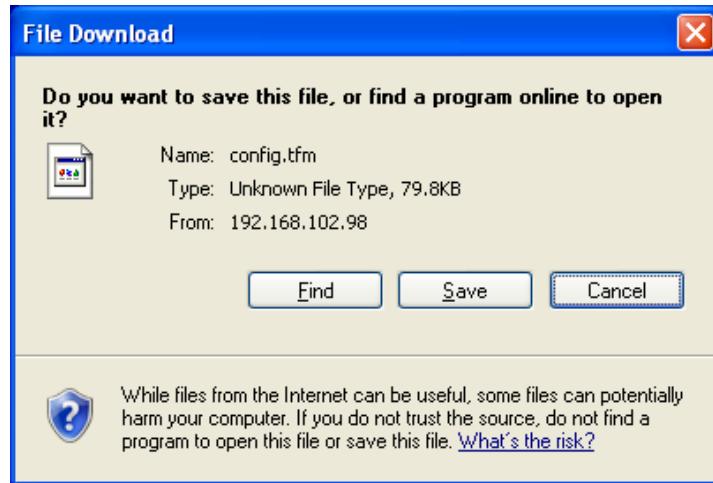
To Load a previously saved configuration:

- a. Click the **Browse** button
- b. Select the .tfm configuration file and click the **Open** button
- c. Click the **Load Config** button to load the configuration. **Warning: This will replace the current configuration in the OneStream unit.**
- d. When the Load has finished restart the unit to use the new configuration.

4.9.2 Save

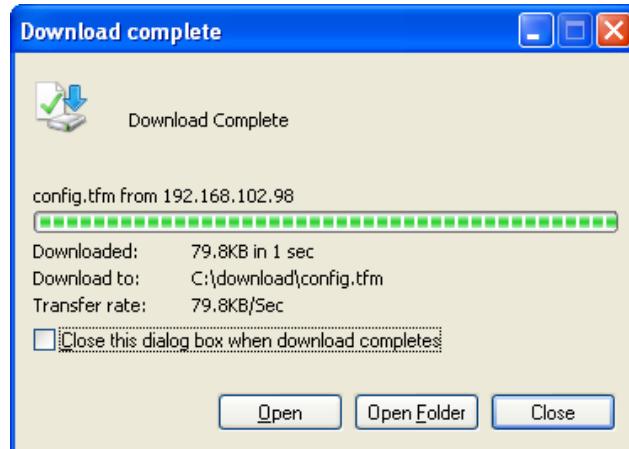
To Save the current configuration to a file:

- Click the **Save Config** button. The following dialog should be displayed:



- Click the **Save** button
- Select a folder to Save the file to and enter a Filename. Click the **Save** button.

You should see the following dialog:



- Click the **Close** button. The configuration has now been saved.

4.9.3 Factory Reset

To restore the OneStream unit to a Factory Default configuration click the **Factory Reset** button. You will be asked to confirm that you wish to do so. After restoring the configuration the unit will need to restart.

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WARNING: Running a Factory Reset will lose all Groups, Routes and other configuration options set on the OneStream unit. It is recommended that the current configuration is backed up using the “Save” option before running the Factory Reset.

4.10 Update Firmware



The Update Firmware page allows you to update the system software in the OneStream Unit.

DO NOT ATTEMPT TO UPDATE THE FIRMWARE UNLESS SPECIFICALLY INSTRUCTED TO DO SO BY THE MANUFACTURER OR PROVIDER OF THE UNIT.

4.10.1 Local Update

This will update the main system firmware of the OneStream unit from a file.

- a. Click the **Browse** button.
- b. Select the firmware file that has been provided to you.
- c. Click the **Open** button.
- d. Click the **Local Update** button.
- e. When the update completes restart the OneStream unit.

4.10.2 Remote Update

This will update the main system firmware of the OneStream unit remotely.

- a. Enter the update server location that has been provided to you or leave it unchanged to use the default server.
- b. Click the **Remote Update** button.
- c. When the update completes restart the OneStream unit.

4.10.3 Bootloader Update

This will update the OneStream Bootloader unit locally from a file.

- a. Click the **Browse** button.
- b. Select the Bootloader file that has been provided to you.
- c. Click the **Open** button.
- d. Click the **Bootloader Update** button.
- e. When the update completes restart the OneStream unit.

4.10.4 FPGA Update

This will update the FPGA firmware of the OneStream unit locally from a file.

- f. Click the **Browse** button.
- g. Select the FPGA firmware file that has been provided to you.
- h. Click the **Open** button.
- i. Click the **FPGA Update** button.
- j. When the update completes restart the OneStream unit.

4.11 Diagnostics



The Diagnostics Page can be used to gather trace on problems, send the Log Files to TelecomFM and to test Network connectivity.

Note: Do Not Adjust the Log settings unless you have been advised to by the Manufacturer or Provider of the Unit.

4.11.1 Runtime Log

To start collecting a Runtime log set the trace levels that have been advised to you and click the **Start Logging** button. All system activity will then be recorded in a log file. To stop the log being generated click the **Stop Logging** button. To transmit the log file to TelecomFM click the **Send Runtime Log to TFM** button – this will then transmit the log file(s) automatically to TelecomFM (a LAN connection must be connected which offers a connection to the Internet for this function to work).

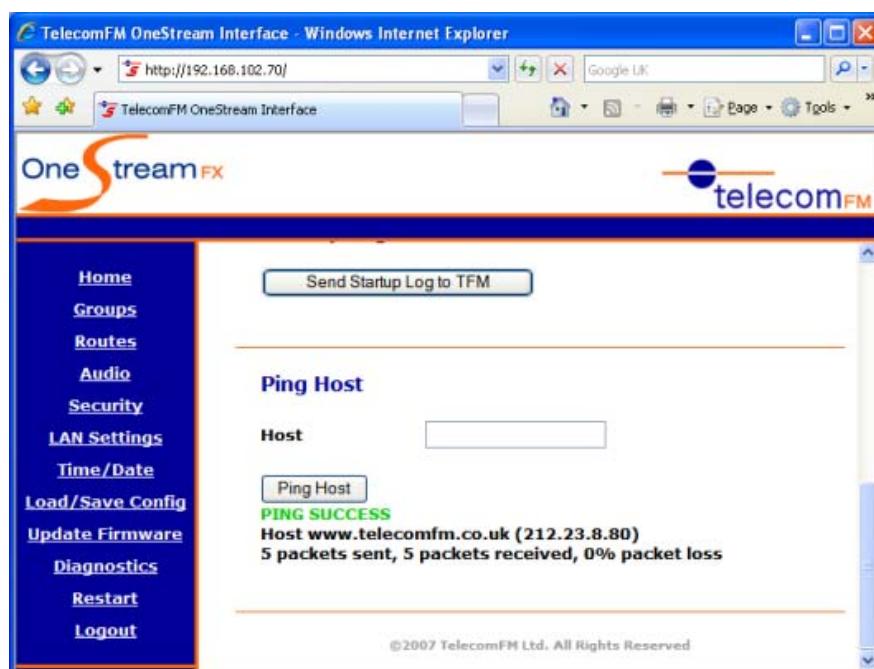
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4.11.2 Startup Log

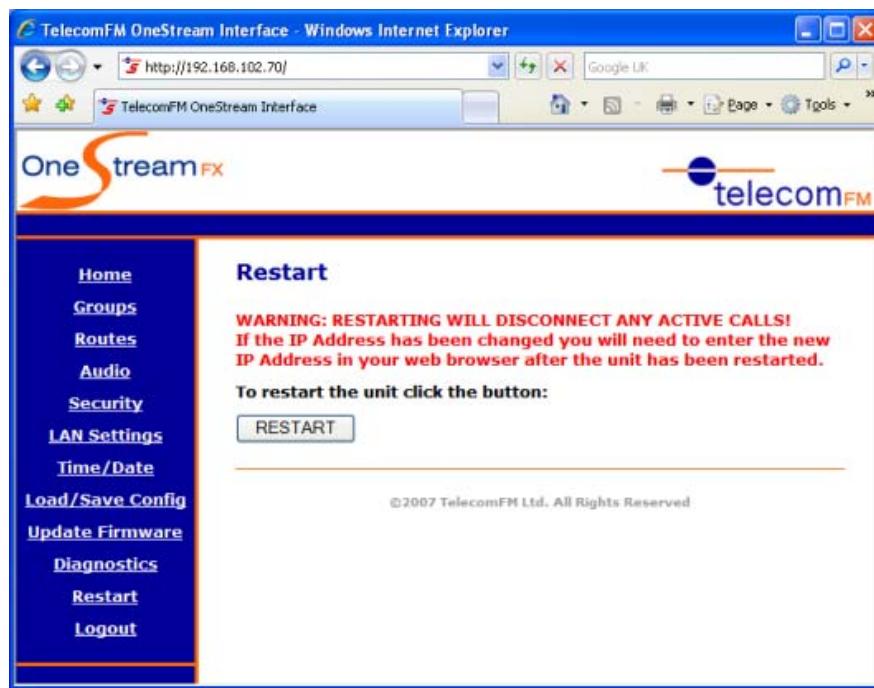
A Log of all Startup Activities is generated automatically each time the OneStream unit is powered on. To send this file to TelecomFM for troubleshooting click the **Send Startup Log to TelecomFM** button (a LAN connection must be connected which offers a connection to the Internet for this function to work).

4.11.3 Ping Host

To test LAN functionality or DNS it is possible to ping a remote host and view the response. Enter an IP Address or a Fully Qualified Domain Name in the **Host** box and click the **Ping Host** button. After a few seconds the page will reload and the response will be shown. For example, if www.telecomfm.co.uk is entered in the Host box the response should be as shown here:



4.12 Restart

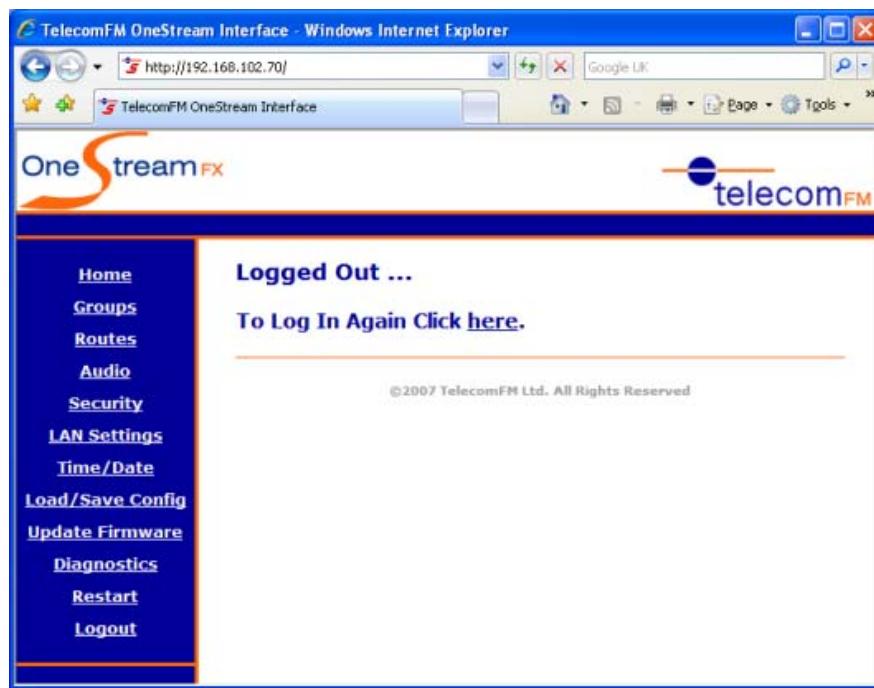


The unit can be reinitialised from the Restart Page. Click the **Restart** button to restart – the unit will restart automatically and you will be returned to the Home page after 60 seconds. If the Home Page does not reappear after 60 seconds click the Refresh button on your Internet Browser. (Note that if the IP Address of the OneStream unit has been changed the new IP Address must be entered in the Address Bar of the Internet Browser).

WARNING: Any Active Calls will be disconnected while the OneStream is restarting.

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4.13 Logout



When all configuration options have been set click the **Logout** link to exit from the Web Configuration Utility.

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5. Additional Features

5.1 Virtual Extensions

The Virtual Extensions feature allows a remote worker to be able to place calls on hold or transfer calls in a similar way that they would when in the office.

This feature can be enabled on all types of interface by ticking the "Allow Call Transfer" check box when setting up Routes.

A user can place a call on hold by pressing the * key. Pressing the * key a second time will take the original call off hold. If the user dials a new extension number while the original call is on hold this will connect a second call. If the user then hangs up then the original caller will be connected to the second call. Refer to the following example for more information:

Example:

A OneStream G is registered to an IP PBX using a SIP Network group. There are 3 people in the office – Bob, Fred and Mary who have extension phones on the IP PBX as follows:

Bob – extension 200

Fred – extension 201

Mary – extension 202

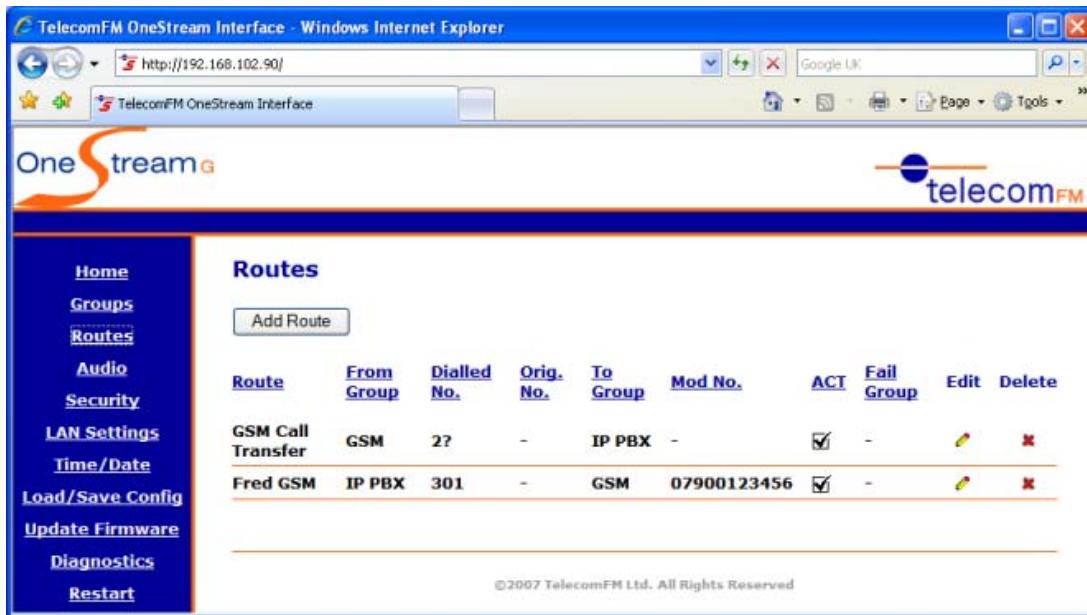
Fred works remotely a lot and wants to use his mobile phone (which has telephone number 07900123456) as a Virtual Extension with extension number 301.

There are 2 groups setup on the OneStream – a GSM group containing GSM modules and a SIP Network group which registers to the IP PBX:



Group	Type	Edit	Delete
GSM	GSM		
IP PBX	SIP Network		

There are 2 routes required for this setup as follows:



Route	From Group	Dialled No.	Orig. No.	To Group	Mod No.	ACT	Fail Group	Edit	Delete
GSM Call Transfer	GSM	2?	-	IP PBX	-	<input checked="" type="checkbox"/>	-	 	
Fred GSM	IP PBX	301	-	GSM	07900123456	<input checked="" type="checkbox"/>	-	 	

The “Fred GSM” route enables any extension on the IP PBX to dial 301 to call Fred on his mobile.

The “GSM Call Transfer” route enables Fred to transfer the call from his mobile to any extension on the IP PBX starting with 2.

Note that both Routes have the “Allow Call Transfer” option ticked.

- Bob is in the office and he dials 301 from the extension phone on his desk.
- Fred is out of the office and his mobile phone now rings. He answers the mobile and now Fred is talking to Bob.
- Fred now dials * on his mobile to put Bob on hold. Bob hears On Hold Music and Fred now hears a dialtone.
- Fred dials 202. Mary’s phone in the office now rings. She answers her phone and now Fred is talking to Mary.
- Fred ends the call on his mobile. Now Mary is talking to Bob.

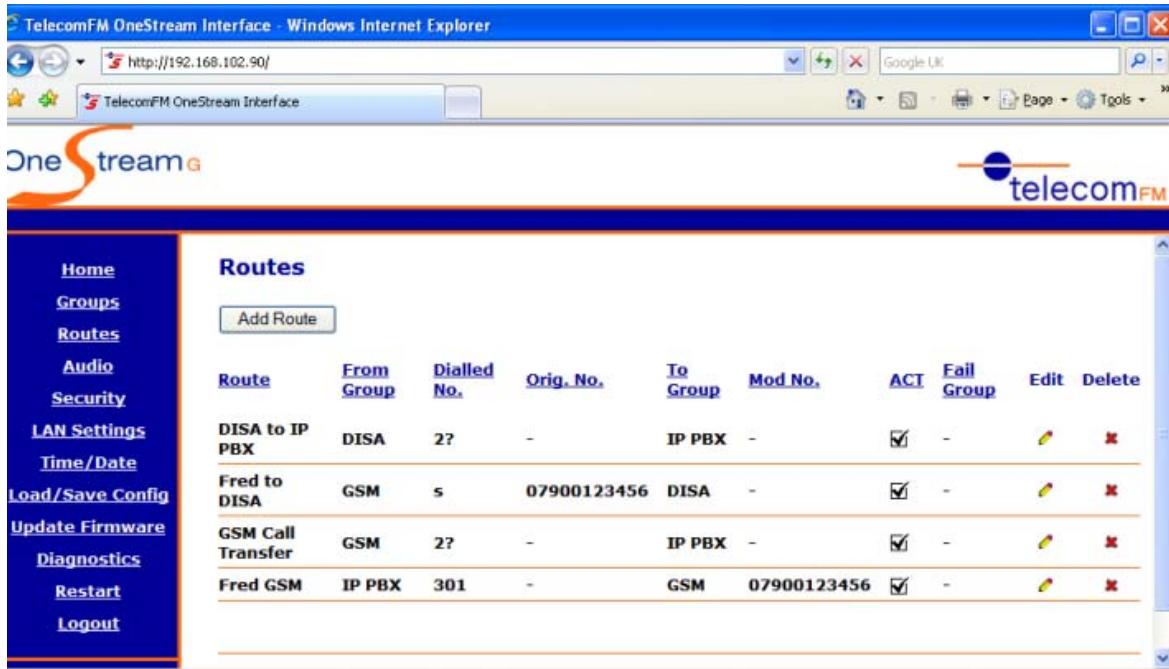
When Fred is working remotely he also wants to be able to call into the office from his mobile phone and dial to any extension on the IP PBX. This can be done using DISA. Once he has dialled in call transfer should also be available to him.

A DISA Group is now added (no password is required because it will be restricted to Bob's mobile CLI):



Group	Type	Edit	Delete
DISA	DISA		
GSM	GSM		
IP PBX	SIP Network		

There are 2 more routes required as follows:



Route	From Group	Dialled No.	Orig. No.	To Group	Mod No.	ACT	Fail Group	Edit	Delete
DISA to IP PBX	DISA	2?	-	IP PBX	-	<input checked="" type="checkbox"/>	-		
Fred to DISA	GSM	5	07900123456	DISA	-	<input checked="" type="checkbox"/>	-		
GSM Call Transfer	GSM	2?	-	IP PBX	-	<input checked="" type="checkbox"/>	-		
Fred GSM	IP PBX	301	-	GSM	07900123456	<input checked="" type="checkbox"/>	-		

The "Fred to DISA" route will send all calls received from Fred's mobile phone into DISA.

The "DISA to IP PBX" route will allow any calls dialled from DISA starting with a 2 to the IP PBX.

Note that all routes have the "Allow Call Transfer" option ticked.

- Fred is out of the office and he wants to speak to Mary. From his mobile he dials the GSM number for one of the SIMs that is in the OneStream. This call is received by the OneStream and sent into DISA. Fred now hears a secondary dialtone.
- Fred dials 202 on his mobile. Mary's extension phone now rings. Mary answers her phone and now Fred is talking to Mary.
- Mary now dials * on her extension phone to put Fred on hold. Fred hears On Hold Music and Mary now hears a dialtone.
- Mary dials 200. Bob's phone in the office now rings. He answers his phone and now Bob is talking to Mary.
- Mary hangs up her phone. Now Bob is talking to Fred.